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ABSTRACT

Strategies suggested in this handbook provide ways for the intermediate grade teacher and the class to share in summarizing and analyzing educational developments associated with "Man: A Course of Study (MACOS)". The evaluation devices focus on pupils' perceptions and critical insights to develop their ability to explore questions about man's "humaneness" and this, about their own. A brief review of MACOS is included -- objectives, teaching techniques, learning theories upon which the course is based, and implications of previous research described in ED 045 561. Questions that helped to organize the evaluation strategies are: Do students as a result of the course: gain understanding of themselves and others; gain cognitive knowledge; emulate and use anthropologists' techniques; and see a difference in the new teaching approach and, moreover, in learning and class activities? Five major strategies described for an evaluation process are: the small group interview, classroom environment checklists; creative formats; content questionnaires; and classroom observations. Samples of interview extracts, children's creative works, opinion surveys, questionnaires, and checklists are included. Related documents are ED 045 461 and ED 049 963. (Author/SJM)

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Man: A Course of Study

Evaluation Strategies

Man: A Course of Study
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Evaluation Strategies

The strategies in this volume are based on an intensive research and evaluation of *Man: A Course of Study*, carried on from 1966 through 1969 in 200 classrooms in all parts of the country. Staff included Dean K. Whitla, (Senior Consultant), Janet P. Hanley (Director), both of Harvard University, Eunice W. Moo and Arlene Walter of Education Development Center, and a number of interviewers and observers.

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Tests are only hard when you know that somebody else is going to get mad at you when you don't do it right.

Karen (Fifth Grader)

Man: A Course of Study isn't so rigid. It's like this: you don't have to stick with it. We've gotten into half-hour long discussions on the entire opposite subject, yet just sprouting little by little, and we learn a lot more than what we would have started out with. It's like something you can lean into and turn any way.

Paul (Fifth Grader)

I like best to help other people in this course. I like working with other people and helping them and having them help me and figuring out the answers together.

Horace (Fifth Grader)

Preface

> ...all educational practices are profoundly political in the sense that they are designed to produce one sort of human being rather than another - which is to say, an educational system always proceeds from some model of what a human being ought to be like.[1]

Although it emphasizes an anthropological and biological introduction to the study of man and other animals, and draws upon sound ethnographic documentation, Man: A Course of Study was developed within a humanistic philosophy. Its organizing question, "What makes man human?" has always been asked in the broadest possible sense, and its framers, from Jerome Bruner on, have emphasized the resonance of the question throughout the material.

Considering the dynamic and complex concerns of this course, how do we as teachers devise workable techniques for evaluation? How do we make some judgments about student learning? What dimensions should we use to reflect about our own teaching? And how do students gain an insight into their own masteries or problems in developing the intellectual competencies and human understandings at the core of this course?

We believe that the evaluation process must be seen first in the most global sense as an extension of a human need to know; this involves reflection about where one has been in order to understand where one is going. Grading clearly is not the primary purpose of such evaluation. The strategies we suggest in this Handbook are not meant to measure children against some hypothetical standard, but to give the teacher and the class ways to share in summarizing and analyzing what has been happening in this course. In the past youngsters have rarely been asked to participate in the considerations affecting the process of their own education. Yet educators expect such curricula as the social studies to provide children with resources for making decisions affecting their private and public lives. The evaluation devices that follow will focus on youngsters' perceptions and critical insights; we hope these methods will strengthen the efforts of the curriculum to develop students' ability to use ethnographic sources as evidence, to progress in skills of hypothesizing, analyzing and synthesizing, to become active and enthusiastic participants in classroom activities, and to raise and explore important questions about man's "humanness" and thus, about their own.

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[1] Neil Postman, "The Politics of Reading," Harvard Educational Review, Vol. 40, No. 2 (May, 1970): 244.

Introduction

Middle Childhood: A Time to Work and a Time to Share

> There is an enormous curiosity during this stage of life -- a wish to learn, a wish to know.... learning contains an energy of its own.[2]

What do we with some certainty, know about the intellectual growth, the personal and social development of children in the upper elementary grades? Teachers, of course, see a great deal -- they observe daily the energy, enthusiasm and insatiable appetite for information that children bring to any subject that interests them, and the industriousness and mutual helpfulness that accompany the arousal of such interest. Teachers are also keenly aware of differences in individual development and in personality style that each child exhibits.

Some important formulations about middle childhood that cut across the fascinations of the individual child to organizing perspective on the age group as a whole have been contributed by developmental psychologists. Researchers have documented several attributes of the boy and girl in middle childhood:

1) developing social maturity in the form of cooperative behavior and regard for others:

2) developing intellectual skills that are oriented more toward concrete operations than abstract thinking, but that revolve around growing language facility and pleasure in communication;

3) orientations toward industriousness and seriousness toward tasks

4) need for continued creative and imaginative expressions and for opportunity to relate knowledge to personal concerns.

Jean Piaget: the tasks of middle childhood involve developing cooperation, rudimentary reflection, mental operations.

Swiss psychologist Jean Piaget's research indicates that the growing social and intellectual capacities of pre-adolescent children include cooperation in social behavior and rudimentary reflection. Most fundamentally, children are developing and using a range of "mental operations" in Piaget's terminology. He categorizes these into such dimensions as logical operations, arithmetic operations, geometric operations, temporal operations, mechanical operations, physical operations.[3] He sees youngsters in middle childhood as "liberated from social and intellectual egocentricity"[4] so characteristic of younger children, and has stressed that relationships with other children serve as the principle liberating vehicle.

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[2]Richard I. Evans, Dialogue with Erik Erikson (New York: Dutton Paperback, 1969), 26-27

[3]Jean Piaget, Six Psychological Studies (New York: Vintage Books/ A Division of Random House, 1967) 48.

[4]Ibid., 41.

In terms of cognitive capacity, however, Piaget suggests that until adolescence the learner needs the support and input of direct perception and experience in developing his thinking (for example, the film material in Man: A Course of Study is input in the form of direct perception); truly formal thinking, expressed through abstract symbols only, is difficult if not impossible. From the evaluation of Man: A Course of Study, we seem to have considerable evidence in support of this position. Children's limited ability to think abstractly is an important factor in their learning in this course (see the Content Questionnaires).

Erik Erikson has also contributed a great deal to our understanding of the development of humans by expanding Freud's stages focused around psychosexual development to include psychosocial stages of development. At each stage of the human life cycle[5] a person has to establish new basic orientations to himself and his social world. He believes that personality development continues throughout the whole life cycle, and that each stage contains a positive as well as a negative component. The psychosocial dimension of primary importance that emerges during the age period from six to eleven has a sense of inferiority at one extreme and a sense of industry at the other. There is a concern with how things are made, how they work and what they do.

Erik Erikson: industry versus inferiority as the crucial psychosocial dimension.

Richard Jones[6] has linked cognitive and psychosocial development together by suggesting that if the child learns to coordinate mastery of the basic intellectual skills he is developing, with mastery of the related social techniques of cooperative behavior, he then begins to view life as an interesting challenge to his sense of industry. If he does not master and coordinate these two dimensions, he begins to view life as a source of defeat and inferiority. Clearly, a child's school experiences affect his industry-inferiority balance.

Richard Jones: school is the testing ground for competence.

Other investigators have helped us in understanding the implications of Erikson's formulations as the child continues his odyssey toward his own identity and personality. In the upper elementary years, students are at the brink of transition from middle-childhood to adolescence. Middle-childhood is a time of groundwork, of preparation for the full blossoming of human capacity. How do we best prepare youngsters for this crossing-over into true self-consciousness and into potential for abstract thinking that brings into play the whole range of human capacities? We have come to realize that school, in some ways, may over-emphasize "industriousness" at the expense of more intuitive, personal and creative modes of learning.

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[5]Erikson discusses seven stages from birth to old age. His work is eminently readable; Identity and the Life Cycle, a monograph available through International Universities Press, Inc., New York, 1959, is a valuable reference.

[6]Richard M. Jones, Fantasy and Feeling in Education (New York: New York University Press), 1968.

David Ricks has pointed out the need for the continual interplay of knowledge "out there" with youngsters' personal incorporation of this knowledge. Does the child see the value of his learning in helping him go about the central task of becoming his own man?

David Ricks: the need to relate knowledge to personal growth and expression.

> The peril of being stuck in this stage of industry too long, or too completely, is apparent in those personalities that seem to have lost contact with the natural springs of imagery and action in themselves, the dry and pedantic people who would rather study the map than take the journey, rather know the grammar than the poetry of life...Good teaching of children at this period transmits the structure and grammar of knowledge. Inspired teaching goes beyond this to help the child...discipline and tame his own inner workings so that he does not lose himself while gaining the world.[7]

An English researcher, Liam Hudson, has produced some provocative studies of the thinking of young adolescents. His work on different personality styles (his terms are "divergent" and "convergent" thinkers) leads to considerations for classroom teaching which are explored in Seminar 18 of Seminars for Teachers. Hudson has been struck by the importance of context for the productivity and imaginative inventions of youngsters. What he found was that youngsters who ordinarily showed fairly constrained, traditional and conservative styles of thinking (the convergent thinkers) in answering a "Uses of Objects" test, became much more inventive and fluent in the context of clear instructions that inventiveness and imaginative replies were expected of them.

Liam Hudson: the importance of context to productivity and inventiveness.

> ....these....studies make it clear that an individual's fluency is not a fixed feature of his mental life. It can be modified grossly by quite small adjustments of context.[8]

He speaks of the "air of uncertainty" surrounding open-ended tasks. Children in the classroom reach in directions they feel they have permission or sanction to explore; and if we are looking for inventiveness, inquiring attitudes, and exploratory problem-solving, clearly there is a lesson here: we must structure and support such behavior in youngsters, and serve ourselves as models of these behaviors:

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[7]David F. Ricks, "Personality and Education," Psychology of the Educational Process, Joel R. Davitz and Samuel Ball, eds. (New York: McGraw-Hill, 1970), 337.

[8]Liam Hudson, Frames of Mind, (London: Methuen and Co, Ltd., 1968), 70.

> ...in choosing...a style of life, the individual is not solely concerned in acquiring certain skills at the expense of others, in picking up one slice of corporate folklore and ignoring the rest. Rather, he is involved in a choice among selves that already exist inside him.[9]

John Dewey, writing long before Erikson, explored the theme of industriousness, speaking of the child of eight or nine to eleven or twelve:

> The mere play of activity no longer directly satisfies. It must be felt to accomplish something -- to lead up to a definite and abiding outcome....[10]

John Dewey: capitalize on the natural resources of the child.

He classifies what he calls "the impulses [of the child] which are available in the school":

> The interest in conversation, or communication; in inquiry or finding out things; in making things, or construction; and in artistic expression -- we may say they are the natural resources, the uninvested capital, upon the exercise of which depends the active growth of the child.[11]

In elaborating these themes, he expressed some of the same views of children's capacities and development that Piaget developed so fully.

> There is the social instinct of the children as shown in conversation, personal intercourse, and communication....Language...is the simplest form of the social expressions of the child. Hence it is a great, perhaps the greatest of all, educational resources. Then there is...the constructive impulse....The child has not much instinct for abstract inquiry....Make the construction adequate, make it full, free, and flexible, give it a social motive, something to tell, and you have a work of art.[12]

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[9]Ibid., 72.

[10]John Dewey, The Child and the Curriculum/The School and the Society, (Chicago: University of Chicago Press, 1956), 106-7.

[11]Ibid., 47

[12]Ibid., 44.

With the controversy now raging around issues of intelligence, its origins and the possibilities for environmental and educational influence on its development, there is a further important point to be made concerning John Dewey's beliefs in children's capacity for learning:

> Intelligence testing concerns [Dewey] not at all. Anyone is capable of thinking and so improving his adaptations and mastery within his environment....In short, individual differences in capacity are of far less consequence than is the fact that everyone can be taught to think more effectively than he does.[13]

John Dewey: Anyone can improve his adaptations and mastery.

Man: A Course of Study is the direct outgrowth of the views of Jerome Bruner; his view of the motivating factors central to learning adds a new dimension to the formulations discussed in this section. Most fundamentally, Bruner believes that the distinguishing characteristic of human beings is that they learn. With this as the basic assumption, he has defined the important components of what he calls the will to learn, and has delineated the factors that lead to satisfaction in educated learning.

Jerome Bruner: enlisting the natural energies of the will to learn.

1) Curiosity.

2) Competence. (We get interested in what we are good at is the way Bruner puts it.)

3) Identification. (Specifically this takes the form of competence models. For the child such people control a rare resource of some desired competence; but "what is important is that the resource is attainable by interaction....In the process of teaching a skill, the parent or teacher passes on much more. The teacher imparts attitudes toward a subject and indeed attitudes toward learning itself."[14])

4) Reciprocity, or the need to respond to others. (Bruner considers this need to be one of the most fundamental motivating aspects of human behavior as we know it.)

The human will to learn is often diminished by "the fact that what the school imposes often fails to enlist the natural energies that sustain spontaneous learning -- curiosity, a desire for competence, aspiration to

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[13]Gordon W. Allport, The Person in Psychology (Boston: Beacon Press, 1968), 353.

[14]Jerome Bruner, Toward a Theory of Instruction (Cambridge: Harvard University Press, 1966), 123.

emulate a model, and a deep-sensed commitment to the web of social reciprocity."[15]

Bruner defines the critical question thus: How do we stimulate thought in the setting of the school where curriculum is set, students confined, and a path fixed? He replies that children, like adults, need reassurance that it is all right to entertain and express highly subjective ideas and to treat a task as a problem where you invent an answer rather than find one out there in the book or on the blackboard. He is concerned with re-establishing in the child's mind his right not only to have his own private ideas but to express them in the public setting of the classroom.

The Brunerian framework of the "will to learn" emphasizes arousing the curiosity of the child; providing materials and exercises that help him develop both social and intellectual competencies; using the teacher in the role of model exemplifying certain attitudes of mind and approaches to learning; and grounding class environment in reciprocal learning situations.

A Curriculum for Middle Childhood

In creating a curriculum attuned to the upper elementary years, the developers of Man: A Course of Study translated the Brunerian learning framework into the following course goals:

1. To initiate and develop in youngsters a process of question-posing (the inquiry method);

2. To teach a research methodology where children can:
   a. Look for information to answer questions they have raised
   b. Use the framework developed in the course (e.g. the concept of the life cycle) and apply it to new areas;

3. To help youngsters develop the ability to use a variety of first-hand sources as evidence from which to develop hypotheses and draw conclusions;

4. To conduct classroom discussion in which youngsters learn to listen to others as well as to express their own views;

5. To legitimize the search; that is, to give sanction and support to open-ended discussions where definitive answers to many questions are not found;

6. To encourage children to reflect on their own experiences;

7. To create a new role for the teacher, in which the teacher becomes a resource to children, rather than an authority.

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[15] Ibid., 127.

It is clear that these goals center around the process of learning, rather than around the product. Just as Bruner suggests, these goals put highest importance on the community of education, on exploration, and on question-posing, rather than on teaching factual specifics or information per se.

The course is replete in concepts and information; but the content and the materials are not superordinate to the critical process goals. Conceptual grasp and mastery of a body of information are never considered separately from the method of working through problems, for it is this congruence of method and materials that creates opportunities for understanding what Jerome Bruner has called the "structure of the discipline." Bruner speaks of the structure of a discipline as learning "how things are related."[16] We can isolate several underpinnings necessary to the development of relationships, to structure of knowledge. These appear basic to any subject, and would involve:

1) the body of information, the data with which to work;

2) the special vocabulary (be it anthropological or mathematical);

3) experience in using the vocabulary and information, in feeling one's way around;

4) experience in manipulating and applying the techniques of problem-posing and problem-solving.

Building toward relationships involves accumulating a great deal of specific knowledge from which to derive regularizing or organizing ideas. The concept of the life cycle as developed in the course illustrates this building process. Youngsters first learn the vocabulary; they discover that birth, reproduction, and death are common to all species. Information is then researched and accumulated about the variations specific to humans and other animals. Making life ropes and life cycle charts provides experience in using the vocabulary and information, and in raising and exploring questions about their own and other life cycles. From these activities, a model develops, an organizing method of viewing sequential stages of growth and development, and of finding the relationships among the life cycles of different animals.

The course does not have as a goal mastery of structure per se, but mastery of structure so that it assists in the thinking process and becomes a tool for raising and exploring important questions. It is not intended that the structure of this course be viewed as the only valid one for exploring behavior; it is hoped, rather, that children will begin to see the usefulness of having a structure to organize their thinking, and the joys of developing one. The test of growth in intellectual competencies, then, starts with growth along the dimensions listed above, and leads to exploration of students' conceptual grasp and use of new models for raising questions about man's humanness.

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[16]Jerome Bruner, The Process of Education (Cambridge: Harvard University Press, 1960), 7.

All of these views of children's development strongly support the pedagogical "appropriateness" of the group activities and verbal exploration of ideas emphasized in Man: A Course of Study, along with the view that the manipulative, expressive, creative activities are critical accompaniments to the verbal interplay. It is the natural resources of the child that the evaluation materials developed in this handbook are intended to exercise. We will focus upon sharing of growth and learning, upon problem-posing and investigation, and upon use of imaginative and creative works as expressions of ideas and insights developed in the course.

In the context of social learning, accepting reciprocity or responsiveness as a motivator leads to a redefinition of responsibilities and roles in education. Teacher and students must share responsibility for what goes on in a classroom, if the energies and enthusiasm of the class are to be put in the service of learning. To be fully implemented, this position must be carried over into evaluation methods; there need to be ways for every member of the class to see his own growth and behavior.

Several of the evaluation procedures suggested in this guide take the small group as their working unit. We have many reasons for this emphasis: first, the use of the group as a sounding board permits youngsters both to share their experiences and to gain a sense of community of learning, and to have a forum for sorting out ideas; second, and perhaps most importantly, the information collected from several thousand youngsters during field testing of this course showed that the vast majority preferred to work with one friend or in a small group, to all other working arrangements. This confirms the studies of developmental psychologists who indicate that task accomplishment in the company of peers is a particularly satisfying way of working for youngsters of this age.

The course itself involves considerable group activity in its exploration of problems and questions, and such activity helps youngsters develop not isolated competencies, but competencies shared and built on each other's knowledge and insights. Bronfenbrenner speaks of the power of the group to motivate goal-directed activity, and he extends the importance of social learning by suggesting that:

> For their own full development, the young need to be exposed...to the standards and modes of behavior requisite for living in a cooperative society.[17]

One should expect, however, that in the group a multiplicity of stances will develop. Every child doesn't have to take the same position; in fact, the power of group sharing often rests in the fact that every member of the group has new and different imputs to make. The course is not aiming for group consensus but for group interaction, thus expanding the range of any one person's experience by exposure to others' interpretations and use of ideas. There are fundamental points of learning that need to be understood as clearly as possible by all; but there are innumerable uses for and expansions of this learning.

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[17]Urie Bronfenbrenner, Two Worlds of Childhood: U.S. and U.S.S.R. (New York: Russell Sage Foundation, 1970), 158.

Implications of Previous Research*

In carrying out the evaluation of this course, we asked ourselves the following critical questions.

1. Does Man: A Course of Study help students learn to understand themselves and others in ways that were not accessible to them before?

2. Do students gain a more accurate knowlege of specific topics by using these materials?

3. Are they better at using evidence (including evidence from all types of media, not only written) and observing natural and social phenomena?

4. Can they go beyond specifics to some comparisons and speculations about human and other animal behavior?

5. Do students find the pedagogy and approach of the materials different from traditional social studies? If so, how do these differences effect learning and class activities?

Results drawn from testing and interviewing students showed considerable growth in terms of the first three questions. To the fourth we found more uneven development, which we attribute in part to the difficulty this age group has in abstracting and generalizing. On classroom environment checklists, directed at answering the last question, we found that youngsters perceived the approach of this course as encouraging social learning, inquiring attitudes and new skills. In other words, the directions of growth in learning that are goals of the course have been documented -- they do happen; therefore, teachers have some context of expected development against which to consider the development of their own classes.

In addition to youngsters' views, the evaluation also gathered extensive reactions from teachers. A brief review of their responses further adds to the dimensions of growth teachers may want to consider in assessing learning in this course. Teachers said they came to see a new set of skills that could be developed in the elementary or middle school classroom. The most frequently mentioned included active listening, communicating, and sharing in group exchanges; observing, abstracting and contrasting.

The most common criticisms were that traditional skills were neglected and that individualized activities and independent projects were not stressed, including use of resource material outside the givens of the course, and written exercises. Teachers described a shift from the didactic mode (written language skills especially) to the interpersonal mode (communications, relationships of children to others in the classroom). Out of this interactive mode, teachers believed that children of all ability levels gained confidence in their own thinking and developed a willingness to express ideas. These skills clearly coincide with the aims of the course developers.

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*For a detailed presentation of national findings from the evaluation of Man: A Course of Study, the reader is referred to Curiosity, Competence, Community, available through the course publishers, Curriculum Development Associates.

Suggested Strategies

Method	Aims	Participants	Placement
Interview	To provide a way to listen, to learn, from children by stepping out of the role of teacher, so that better teaching becomes possible. To give youngsters the opportunity to express verbally and in depth their use of the ideas of the course and their feelings about learning. To enable children to criticize their own learning, and to give them some power over their own education.	Teachers and students	After major units of the course
Classroom Environment Checklists (Opinion Surveys)	To provide feedback to the teacher about the classroom environment. To provide children with a common format for considering the materials and activities of the course, for thinking about personal learning preferences, and for evaluating the climate in the classroom; to give the class an opportunity to influence their future instruction.	Students	Toward the ends of the Animals and the Netsilik materials
Creative Formats	To encourage expressions of children's imaginative and creative work. To give the teacher one framework for exploring children's understanding of the course, as expressed in their creative responses to it. Such responses involve both deeply felt personal creations and more integrative projects that combine elements and methods of the course into the student's own work.	Students	Throughout
Content Questionnaires	To encourage children to organize their thinking around conceptual problems, vocabulary usage, personal interpretation of the meanings in the course, and to exchange their thinking with one another and the teacher. To provide the teacher with a format for diagnosing children's difficulties with course topics, and reviewing information gains and concept mastery.	Students	Toward the ends of the Animals and the Netsilik materials
Classroom Observing	To provide the teacher with a method for reflecting about classroom events and activities, the teacher's role in setting the tone and style of the class, and the aims and results of teaching methods. To provide a basis of information for change in teaching strategies.	Teachers	Periodically - several times during teaching of the course, as convenient

Suggested Strategies

The strategies we suggest for an evaluation process are presented in detail in the next sections. Five major suggestions are made: the small group interview; classroom environment checklists; creative formats; content questionnaires; and classroom observations. The first four involve the participation of both the teacher and the students, the last is intended for teacher use only.

In this course particularly the teacher has a fascinating opportunity to follow the ways in which thought and understanding grow -- to follow children's developing use of vocabulary, of examples, of more general ideas and personal insights, and to listen for the questions children are raising. This can be difficult to focus on directly in the hubbub of class discussion, but the suggested techniques of interviewing small groups of children and observing (either one's own class session by recording, or another teacher's class directly), give opportunities for analysis and reflection about children's development. The interviews also give children a chance to express their thoughts around a set of organizing questions intended to help them reflect about their learning as they talk.

The classroom environment checklists contain items concerned with students' involvement and participation, and assessment of their own attitudes and learning styles. The checklist is meant to give youngsters a way of considering materials and activities of the course, for thinking about their personal learning preferences, and for evaluating the climate in the classroom to provide feedback to the teacher.

Examples of student creative work are included to illustrate the personally expressive ways children can demonstrate their use of the ideas in the course. A brief framework for considering imaginative creations is also provided.

Content questionnaires prepared for the two major sections of the course, animal studies and Netsilik materials, are intended to help children develop relationships among various aspects of these materials and to provide the teacher with diagnostic tools. Conceptual problems, vocabulary use and personal interpretation of meanings in the course are covered in the questionnaire.

Beyond their immediate use, both the content questionnaire and the classroom environment checklist are intended to be take-off points for further discussion. The sample tests and checklists provided in the Handbook are intended for use by the teacher without restriction. If, however, teachers do not wish to duplicate their own copies, they are available from the course publisher, Curriculum Development Associates, at nominal cost for handling and shipping.

As teachers try out these strategies, the seminars would seem to be an ideal situation in which to share interesting results or problems in implementing this process. Developers and researchers at EDC need the same kind of feedback as do teachers and students. We would be eager to hear from readers who use these strategies so that further editions of this Handbook can draw on your experiences.

Interview

Man: A Course of Study instigates a process of inquiry and a curiosity and concern about the human condition, culminating in the acquisition not only of shared concepts and attitudes, but of individual stances and interpretations. Standard measurement practices (the objective or short-answer test) are not the most appropriate for this course, because they do not permit the teacher to explore in depth and with consistent format the ideas and feelings that may be set brewing when children work with these new, multi-faceted classroom materials.

The open-ended interview, however, can prove particularly useful to teachers in the upper elementary grades, because many children of this age are more articulate when speaking than when writing. We have considerable evidence of this from our evaluation of Man: A Course of Study. If we had relied totally on open-ended written questions for testing information and conceptual grasp, we would have a very sparse and in some ways inaccurate picture of students' ability to handle this course. What they really are thinking and learning becomes much clearer in the open-ended interview, because they are able to expand their thoughts in ways not accessible to them when they must resort to written expression. Also, the ideas in Man: A Course of Study are best expressed in responsive, interactive situations.

A New Role

An enjoyable and important aspect of interviewing is that the classroom teacher can step back from the demands of the teaching role and become a learner, a listener. There are other occasions in the classroom when the teacher can listen to children without "monitoring" their ideas. But in the interview the teacher does no "teaching," makes no corrections, suggests no further examples or illustrations, passes no judgment on the mode of presentation. It is a time when children can "tell it like it is."

Attentive listening and questioning produce the best interviews, when children reveal the full range of their thinking and feeling. Children of this age when asked for opinions, when asked to judge materials, when asked to clarify ideas, usually respond with great zest. They care a great deal about being treated as "grown-ups," about displaying competence and about showing their grasp of a subject area -- in fact, they often show an assimilation of detail that is awe-inspiring.

Introducing the Interview

The teacher must put the children as much at ease as possible. An atmosphere unlike that of a traditional classroom test helps draw out the best ideas that children have. One way to create the relaxed mood is for the interviewer to introduce himself in his new role thus:

> When you work in groups or when discussions are going on, I don't get as good an opportunity as

I'd like to hear the ideas and opinions of each of you. So I thought that occasionally we could gather in small groups so that you could talk about the course. I'd like to hear more of your personal opinions. I'd also like to hear your thoughts about some of the ideas of this course. Many of them are very new and not always easy at first. Maybe you can help me to understand what ideas you personally don't find clear, and what you think we need to spend more time or less time doing.

Mechanics of the Interview

We suggest that children be interviewed in groups of three or four for about twenty minutes while the rest of the class pursues other activities. You might interview two groups in one day, spreading the interviews over a week or more. Or you might decide to interview only half the class after the Animals section and the rest after the Netsilik section. (Children will want to be told this, if you so decide.) An area apart from the classroom is best for interviewing; if that is not available, then the quietest corner or the section of the room farthest from the rest of the class is the best alternative, with the children sitting with you in a small circle, and facing away from the class.

As you start each interview, some simple explanation of procedure may be necessary. Children should know that this is not a time for raising hands -- this is a chance to talk among themselves, and discuss the questions you put to them. As long as they speak one at a time, there are no fixed rules of procedure -- just a normal flow of conversation.

The primary function of the interviewer is to set the stage and control the pace of the conversation. During the interview, there should be no correction of children's statements. Often, the children correct each other, but the listener should (however difficult it may be) refrain from "teaching."

To avoid the problem of the child who wants to monopolize the interview, it should be made clear that each student has a turn at answering a question (with elaborations following from the rest of the group), and that the amount of interview time is limited. In this way the interviewer also gets a clearer sense of the personal knowledge and attitudes of each child.

You may want to have a few sets of questions that you alternate among groups, so that a new kind of "test-wiseness" doesn't take over. Perhaps one or two of the questions you feel are most important could be common to all interviews.

The interviewer should keep an interested but unevaluative facial expression (if possible) so that children will not perceive what he wants or expects to hear.

Teachers who experiment with this type of interview should have access to a tape recorder. Listening later to the tape of the session is the only successful means of assessing the statements each child makes. An earlier E.D.C. occasional paper on "The Grouptalk" contained comments about the use of the tape recorder in discussions:

> 'I was amazed at how much of the children's discussion I actually had not heard. Listening to the playback I heard details and comments I had completely missed. I found myself remarking, I don't remember that part at all!'
>
> Later when this teacher led a discussion, she wrote, 'The knowledge that proceedings were being taped was part of the feeling of security. I knew I could refresh my memory and evaluate the talk after the session was completed. Significant evaluation of the children's remarks...cannot, judging from my experience, be accomplished without the help of the tape playback.'[1]

Summary of Interviewing Pointers

The following are adapted, with some modifications, from the National Opinion Research Council's Interviewer's Manual, and may be useful as a summary of some obvious but very salient points about interviewing:

1. Children must feel relaxed and at ease with the interviewer-teacher, to the point where they feel free to say what they really think (or feel) about a given subject without fear of criticism or correction. Be as encouraging, reassuring and supportive as possible without influencing or biasing the content of what the student is saying.

    a. Be a sympathetic, interested and attentive listener, without taking an active conversative role; this is a way of conveying that you value and appreciate the child's opinion.

    b. Be neutral with respect to subject matter. Do not express your own opinions either on the subjects being discussed by the children or on the children's ideas about these subjects, and be especially careful not to betray feelings of surprise or disapproval at what the child knows.

    c. Your own sense of ease is also important. If you feel hesitant or hurried, the student will sense this feeling and behave accordingly.

---

[1]Babette S. Whipple, The Grouptalk, Occasional Paper No. 10, (Cambridge: Educational Services Incorporated, 1967), 14.

d. Children may at first be intimidated by the idea of being interviewed by the teacher. Here, the important thing is to keep the interview very friendly in mood and tone, and non-judgmental.

e. The students may also be fearful that they will expose an attitude or idea that you don't think is correct. Reassure along the lines of, "Your opinions are important to me." "All I want to know is just whatever you think -- this isn't a test and there isn't any one answer to the questions I want to ask."

2. Specifically, we suggest that you:

a. Phrase each question similarly each time.

b. Keep the outline of interview questions before you.

c. Be prepared to reword a question if it is not understood or if the answer is vague and too general. Sometimes it is hard not to give an "answer" to the question in the process of re-wording it.

3. Eliciting full and relevant responses is perhaps the most challenging aspect of interviewing -- the facet of the task requiring the most patience and skill. The general technique for solving these problems is called "probing" - or <u>continued neutral questioning</u>.

<u>Don't knows</u>. Children sometimes understandably use a "don't know" response to gain some time to gather their thoughts. Don't be in too big a rush to move to another question. If you sit quietly -- but expectantly -- students will usually think of something further to say. Silence and waiting are frequently your best probes for a "don't know." You'll also find that other useful probes are: "Well, what do you think?" "I just want your ideas on that." After a reasonable length of time, however, simply go on to another question.

4. To summarize: In the interview situation, which is probably somewhat unique to children, your job is to <u>help</u> the child give answers which are as relevant, clear and complete as he is capable of making them. This is not an occasion to pass judgments or opinions or to clear up misconceptions. Finally, if you wish, jot down or record at the end of the interview anything about the manner, reactions, and non-verbal gestures of the children that may have bearing on their answers to specific topics.

Sample Interviews

Following are extracts from three interviews: one is concerned with process in the classroom; two illustrate responses about course content. They are intended to give you a feeling, at least, of the way in which children respond in small group situations, of the tone of the interview, its content, and of the non-evaluative role of the interviewer as a facilitator.

INTERVIEW 1

Interviewer: Did you ask questions to the teacher, or what happened in class?

Jacqueline: We asked. Sometimes the whole class and someone in the class that knew the answer would tell us the answer. And sometimes...when they'd tell us the answer, somebody else in the classroom might disagree with them.

Morris: You get a chance to say more what you're feeling. In any other class you're going to have to just write down reports. It gave me a chance to express how I feel about that particular field.

Jacqueline: We had books and we read and we asked questions and Mrs. ...had a girl in the classroom write down the questions and we read our way through the books and found out some of the answers and came back and the next day she'd ask us if we knew the answers. And sometimes we didn't find out the answers and we'd have to look into another book.

Interviewer: And sometimes, I imagine, you never could find any answers, to some questions that no one knows the answers to. Did you find any of those?

Morris: There was one question I asked about the herring gull. I asked when they need an extra island, the mates, do they stay together or do they break up? And we never found an answer to that question.

Interviewer: Did you ever work in groups? Did you ever sit and talk in groups together?

All: Yes.

Venus: Sometimes, you know, our groups are in students, you know, we're by ourselves. And in this group we can argue with each other and like that and then we can go up to a certain book and look into a certain page and write down the answer to it. But in the class, you'd have to have the whole class say, "Well, you read this page and you will find the answer to this thing." But when you're in a small group, you walk up to it and say, "Well, here's that answer, right here."

INTERVIEW 2

Interviewer: What have you liked best so far?

Roxanne: I liked the baboons better than the salmon because they... the salmon never knew their parents. It seems so strange to have just everything they can live with, you know. They just know everything and do it and they have the urge to swim downstream and swim upstream and they have to. It seems such a tiresome life. And it doesn't seem like the salmon plays -- that they have any contact with each other except when they're mating -- you know, the eggs and everything. But they really don't. Baboons, they play with each other and they have contact with each other. They give warning calls and they care about each other. But the salmon, it doesn't seem as if they care at all.

Interviewer: What about the herring gull. Where would they fit in?

Roxanne: Well,...they don't really. The parents are really the only ones who sort of care for them. They feed them but, you see, the baboons learn, you know -- they wouldn't feed them. They feed them because they have the instinct when they are pecked, they have to regurgitate food. But they wouldn't feed them otherwise. And the territories -- if the chick wanders out of its territory it would be killed by another one. And it doesn't seem like they care about [them] because they would kill each other just if they were out of the territory.

Interviewer: What's the reason for that?

Roxanne: They want to protect their young. They don't want strangers around. Baboons, they learn. They do much more.

Karen: And they do more things.

Roxanne: I think the salmon learns the least, then the herring gull and then the baboon, and then the Eskimo! And it's going to be all a step higher!

Karen: So far I like the baboon better because they learn more. Salmon, all they have is instinct and urge.

Roxanne: They are more like us. It seems like the salmon are not very clever. I guess they do this because they have an instinct and not because they want to. I'm sure. It seems like they are sort of captive. Someone's holding their brain and sort of telling them you <u>have</u> to swim upstream and you <u>have</u> to do this and they don't have, like, their own free will.

INTERVIEW 3

Interviewer: O.K., I want to show you some cards. Think of the words [fear, love, friendship, beliefs, family, dreams]. Which two do you associate with the Eskimos and their life and why?

Susan, Edie, Jimmy: Beliefs.

Susan: I think love, love and beliefs.

Edie: Belief.

Susan: And something else. Family.

Edie: No, beliefs and friendship, because you can, you know, they share....

Susan: I don't think friendship has, they only know most of their relatives, they're almost suspicious of strangers. I think "fear," because they're almost suspicious of strangers.

Jimmy: Oh, but that is dumb.

Susan: They have a fear of lightning, they're scared of things like that.

Edie: That's a belief, that they're scared of lightning.

Susan: Yeah, I guess so, but I take "love."

Jimmy: No, beliefs and family.

Edie: Beliefs and family or beliefs and friendship.

Susan: I don't think so, because you can love a family, or friend, or a stranger. Love is, how they're, they wouldn't have a culture if they were not that associated with love because...

Jimmy: They wouldn't have a culture if they weren't family, because the man needs the wife and the wife needs the man.

Susan: All right. But they need love.

Edie: They need friendship.

Jimmy: Friendship?

Edie: Not to be a husband and wife, but I mean, if you say "family," you kind of associate with your friends.

Susan: I don't think so.

Edie: It all depends on your description of families.

Susan: I don't think so. Actually....

Edie: I mean, a family can be a friend, but a friend can't be a member of the family.

Jimmy: Yes he can.

Susan: Ah, I don't know. We had friends that would come over to the house, and they're just like the family, a member of the family, but they're not....

Edie: That's friendship, it's always friendship, because....

Susan: Well, I'm not going to be friends with my brother; I love him, I'm not going to be friends with him.

Edie: I don't love mine.

Susan: I'll be enemies with him any ....

Interviewer: You're not friendly with the people you love?

Edie: Yeah, but that's not me. My brother cheats in Monopoly.

Jimmy: My brother doesn't cheat; he just beats me up all the time.

Susan: My brother's always, my mother says never to hurt him, because he's sort of sick, but still I don't think that has anything to do with what we're talking about because love has, their whole culture is associated with love, if the man didn't love his wife they wouldn't have a child, and you wouldn't have....

Edie: But they have to live that way, they've got to have someone to support them so they will have a child. What happens when they grow old, and then....Even if they don't love each other, they're going to have one.

Susan: But you've got to.

Edie: You don't have to love.

Susan: You do.

Jimmy: But the child is part of the family.

Susan: Correct.

Jimmy: You've got to support them.

Interviewer: What's the opinion here?

Susan: Love. Love.

Jimmy: I don't think so. You love your family, you don't family your love.

Interviewer: What other one would you choose, Susan, besides love?

Susan: I'd say beliefs.

Jimmy: And I'd say, "family and beliefs."

Edie: I'd say, "friendship and beliefs."

Jimmy: We've got a three-way tie here.

Interviewer: One more question. Did you see any films that made you admire the Eskimos?

Jimmy: The way he hunted animals, the way he hunted the caribou.

Susan: Yes, that one, and the way he cut them up.

Edie: Yes, and his knowledge and how he gets the beater, I mean, knowing where the caribous are going to come, and then judge. Well, you know they're going South, but where do you think they'll approximately go? I mean, will they go through a narrow crossing place or a wide one? Their knowledge for that....

Jimmy: I think they're just kind of, you know, I think they encourage a little kid, I mean, maybe they taste good, but when he ate that eye ball I really got sick.

Interviewer: Is there anything that made you dislike this Eskimo?

Susan: I think he's, he's not fickle, but he's sort of like that, because he doesn't pay any attention to the guys that do him any good, he doesn't even have very many, he's always giving food and junk, not food, but he's always giving his services to the gods who can do something for him, and he's not feeding, well, not feeding, to make the gods that cause hardship and junk, make them be nice to him. I think that he should make the good guys be nice to him, not the bad ones.

Jimmy: They already are nice.

Edie: The story, like when he hid the fish in the castle, he must have been....Not generous.

Jimmy: See, there's a story about a man, and his sharing partner ...and he becomes friends with his sharing partner, but the man is lame, and then during caribou hunting time

he's O.K., you know, he's good for a kayak, or he hunts them real well, but when it comes time for the seal-hunting time, he knows that he's no good, so he just leaves him out there, and the next-door neighbors take pity on him, and he turns out to be a great hunter, if you take him across the ice in a sled thing, and when the guy that used to be able to hunt well with the caribou came to them he had not had good hunting while hunting the seals, so the other guy that was lame shared with him, and they said, "Isn't it nice to have a good sharing partner?" And I thought that was really very good.

Susan: I think that the Eskimo has a bunch of humor, but some of the ways he treats friends and junk are the exact same way we do, and I always think of them as a generous people, but you know, when you hear about them doing, ah, but then on the other hand I mean, like Kunok said, "A man must decide what he has to store, and what he can afford to give away," so I don't....

Jimmy: But I mean, seven parts of a big beautiful trout....

Interviewer: Thanks very much.

Examples of Good and Bad Interview Questions

While in the process of evaluating students' responses, it is wise to keep in mind that the way in which a question is posed affects the nature of the response. Following are examples of ways in which questions might be framed, with some comments as to their effectiveness.

Questions on materials:

Poor:	Did you enjoy the film on the chimpanzee?	Allows for one-word rather than in-depth response. "Enjoy" is leading word -- generally precludes possibility of negative response.
Better:	How did the film on the chimpanzee compare with the other films you have seen so far?	Question sets up problem which can then be dealt with by child in whichever way he chooses -- responses will often be content-oriented.

Questions on content:

Poor:	What is innate behavior?	Asked in isolation, this question requires definition as response. Sets up test-like (and threatening) situation.
Better:	How would you explain to someone the difference between innate and learned behavior?	Requires contrast and comparison rather than definition, and puts the child in a responsible role.
Poor:	Is pecking an innate behavior of a herring gull?	Asks for straight recall.
Better:	If someone said to you that human and herring gull parents are very much alike, what would you say?	Sets up a problem to which most students will readily react. Comparative illustrations sought. Less test-like in tone. Could then be followed by a more direct question, such as "What do you mean by innate behavior?" should the student himself use the term.

Questions on attitude toward Netsilik:

Poor:	In what ways is the Netsilik family like yours?	Leading question -- assumes that there are similarities.
Better:	Does the Netsilik family seem like your family in any way?	Permits the child to decide whether or not he sees similarities.

Poor:	Now that you have seen a number of films on the Netsilik, do you admire them or dislike them?	Forces the child to to take a side.
Better:	Did you see any film that made you admire the Netsilik? Did you see any film that made you dislike them?	Allows for evaluations on both dimensions.

Sample Questions

We have provided several sets of sample questions that could be used at the conclusion of various sections of the material. You will notice that each set of questions starts out at a fairly general level. This serves two purposes -- to cue in the children that we are not looking just for facts, and to put them more at ease that we really are interested in their opinions and personal responses as well as in mastery of the content.

Following Salmon and Herring Gulls:

1. What do you think of the Animals section so far? What have you most enjoyed learning about or doing? What have you liked least?

2. When we walk down the street, we often see someone we know and stop to talk to that person. Do you think that salmon, when they pass each other, recognize or know each other in the same way? Why or why not?

3. How would you explain to someone what we mean when we talk about life cycles?

4. Now that you know something about the herring gull, if someone were to say to you that human and herring gull parents are very much alike, what would you say?

5. What do you think makes a herring gull a successful parent?

Following Baboons:

1. So far we have studied about the salmon, herring gull and baboon. Which did you find the most interesting? Why? Which did you find least interesting?

2. Let's close our eyes and imagine we are on the African Savannah observing a baboon troop. What do you see? (What does the place look like? Where are the baboons? What are they doing? Are they the only animals there? What kinds of things are they doing that are innate? Learned?)

3. Do you think that baboons live mostly by instinct or mostly by what they learn in the troop? How would you explain to someone the difference between innate and learned behavior? Is any of your own behavior innate?

4. I thought it might be helpful if you could look through the booklets we have read so far and tell me what you thought of them. (Which did you like most? Least? Find hardest to understand? etc.)

Following the Netsilik Eskimos at the Inland Camps:

1. What is your reaction to this part of the course compared with your study of the herring gull and baboon?

2. Does the Netsilik family seem like your family in any way? In what ways are they similar? Different?

3. What do you think the Netsilik really care about?

4. Does all this material on the Netsilik seem real to you?

5. Prior to the interview, select three or four Eskimo cards that show Netsilik tools. Show them to the students and ask: How do the Netsilik use these tools? What do they tell you about Netsilik life?

Following the Netsilik Eskimos on the Sea Ice:

1. I thought it might be helpful if you could look through the booklets we have read so far and tell me what you thought of them. Which did you like most? Least? Find hardest?

2. Have you seen any film that made you admire the Netsilik Eskimos? Dislike them?

3. What did you think of the story about Nuliajuk and the story about the boy and girl who turned into thunder and lightning? Why do you think the Netsilik Eskimos tell stories like these? How do you feel about these stories?

4. Write down these words and show them to the children: fear, love, friendship, beliefs, family, dreams, jealousy, killing. Show the list to the children as you read the words to them and then ask: What two words do you associate with the Netsilik Eskimos as important to them in their lives? Why?

5. Show children the words: salmon, herring gull, baboon, you. After reading them to the children, ask: You have also been studying about the Netsilik Eskimo; which of these words is the Netsilik most like? Why?

Analyzing the Interview: A Suggested Framework

What framework might the teacher use in listening to the tapes and analyzing student responses? In addition to reviewing content responses on the basis of their accuracy, there are four major dimensions that are useful to consider:

1. Individual reactions to materials and activities:

Which booklets, films or exercises helped children learn most and were most enjoyed? Do certain children show enthusiasm for certain materials and activities, and if so, does this help you to better understand and plan for individual learning styles? Does student response to the course help you to understand your own teaching better?

2. Group interaction, social learning:

Did children listen to each other, build upon each other's statements, help each other summarize?

3. Levels of conceptual grasp and elaboration:

Student responses occur on different levels -- recall, general ideas, extrapolation, etc. In many instances students have an ability to recall specific parts of the material but are not able to get to general ideas or to extrapolate from specifics. For example, the following are student replies to the question, "What do we mean when we talk about life cycles?"

> Birth, growth, reproduction and death.
>
> * * *
>
> Well, usually you can start off anywhere in the cycle. So there are the mother and the father, they get together. They mate. They build the nest, and the mother lays the eggs. The eggs are hatched. They incubate it, and then they're hatched. They grow up, get food from the mother by pecking the red spot, and when they're grown up, they do the same thing that their mother and their father did.
>
> * * *
>
> How they live. How they live all through their life. It means how they reproduce and how they grow up, how they act and how they die. They die and keep having children. It's they're never extinct. The really important thing is that he reproduces and he survives.

The first response above is an example of straight recall: it was not elaborated by the student. The second response is replete with many details, but little more than that; the third includes some interpretation.

Student responses often initially show accurate recall, because they involve a reiteration of examples presented in the course. Their subsequent comments, involving application of the concept to new problems or situations as posed by the interviewer, however, often, because students can no longer rely on memory, reveal confusion. For instance, one student was able to define innate behavior using examples presented in the materials:

> (Do you think you could explain what is meant by innate behavior?)
>
> Innate behavior is there when you come from birth. It's like, innate behavior is like they have the urge to like scratch themself, to clean themself, and they have that urge to peck at the mother's red spot and the father's and they have....that's all.

But his next response revealed his confusion as he ventured beyond specific course materials:

> (Do you do anything that is innate?)
>
> We learn to talk.

There appear to be special problems for children of this age group in grappling with the larger conceptual issues of the course. Interviews particularly are apt to reveal children's confusions. For example, children do have difficulty distinguishing between behavior controlled by innate urges -- the internal drives that are beyond control or understanding by the animal -- and behavior governed by man's symbol system for organizing experience and creating rules of life. Consider the following interview:

> Interviewer: I have a set of words: salmon, herring gull, baboon, American. I was wondering which of these four you think the Netsilik are most like?
>
> Child: Umm....let me think. I think the salmon, because the salmon, when they lay their eggs, they just go upstream because they have to do it.
>
> Interviewer: And how are the Eskimos like the salmon?
>
> Child: Well, the Eskimos, they have to do what they think is right, and the salmon, he just has to do it, you know.

This child's response is not so much a case of ethnocentrism as it is an example of the penchant of eleven-year-olds to think in specifics. Many specific ways of Netsilik life seem similar to animals the children have studied -- the hunt for food, the eating of raw meat, the annual migration.

In the daily survival pattern, the Netsilik show few specific similarities to Americans -- they do not go to supermarkets, to the office, to school. Left ungrasped is the core difference between the innate and inarticulate urge and the elaborate system of regulatory beliefs and survival mechanisms that suggest and coerce certain behaviors in the human animal.

These are some other responses this question has elicited:

> ....It sounds pretty kind of silly, but more like baboons, because they're fighting to stay alive, but still like each other....
>
> * * *
>
> (baboon)....Because just like they have to have survival, the baboon has to live for survival. The bigger baboons are more dominant, and the Netsilik men are more dominant. And they get their water and their food almost alike. They attack and they kill and then they eat.

Children of ten or so utilize in their thinking one-to-one correspondences. With this age group, generalizations seem to be rather accidental rewards drawn out of a series of examples, and are for the most part categorical -- "Eskimos are nomads" -- rather than relational. In terms of Jean Piaget's studies of the stages of intellectual development, we would expect the fifth-grader to be moving from the stage of concrete operations into the formal stage of mental development; that is, to be in the process of developing mental operations that result in ability to comprehend relational significance. Within this framework, the limited ability of children to generalize beyond apparent similarities to the more unifying similarities, as in the case of the child who says that the Netsilik are like the salmon, is due in part to immaturity in cognitive processes.

The manner in which we interpret problems that we hear in the interview depends to a large extent on our expectations of fifth-graders. If we accept limits in the ability of the young to recognize general ideas and to relate them to one another, then standards for conceptual attainment are less stringent. For example, while the response below does rely upon specific comparisons, it nevertheless reveals the child's search for analogies that express his own concerns with nurturance.

> ....(the baboon) because the Netsilik Eskimos run around and find food and the baboons go around on the savannah finding food. And most of the time the Netsilik need somebody to help them -- they groom when they're little and the baboon's mother or some other baboon just sit around and groom each other. And the baboon troop at night, the baboons just sit down softly and groom each other.

Reviewing the interview material from the perspective of conceptual grasp, then, it would be appropriate for the teacher to consider the following questions:

a. Do students have a basis of fundamental course knowledge and understanding from which to operate (e.g. a set of examples; accurate vocabulary; some consistency and correctness of terms -- innate vs. learned behavior; some grasp of general meanings)?

b. Are students simply repeating course information or do their responses contain illustrative and conceptual interpretation?

c. Do the responses provide evidence that the materials are relevant to the students' lives and experiences?

d. Over time, do students draw upon earlier ideas brought up in their work, to explain and enrich the current section being studied?

In addition, the responses given to the interview sequence on page 35 raise such issues as:

> Are there dangers in learning by analogy?
>
> Is there a problem of "overlearning" similarities between human and other animals?
>
> Does the wording or tone of the question itself suggest the human-other animal analogy?
>
> What understanding could be gained from these responses that could not be gained from an objective test item? Should any of these responses be considered wrong?

4. Interpretations of human behavior and values:

One of the benefits of not teaching during the interview is that it frees the student to use the course materials in whatever way he chooses, and frees the teacher to explore students' personal stances toward the ideas of the course.

The interview is a particularly good way to explore students' developing views of human behavior and to gain an understanding of how one's teaching style may be influencing attitudes. A brief study of one class's views about Netsilik myths may help to illustrate. The teacher from whose classroom the students quoted below were drawn, placed a great deal of emphasis on the psychosocial development of her students. Her concerns lay mainly in the direction of facilitating effective group interaction, and in encouraging her students to raise questions and to express their opinions freely. She was less interested in accuracy of information or in pursuing the cognitive issues which were raised. The result was that students in her class exchanged opinions freely but never examined them closely. For instance, they interpreted the myths literally, with the following results:

Marsha: Some of the stories are so confusing that they don't make sense. One says the world collapsed and all the animals died.

Bob: They believe that the world cracked up and these two men got married, and one man goes, "I'm a woman." So he turns into a woman. They pick their children by ...if they want girls, they stick around.

Marsha: They just look around if they want girls.

Bob: Yeah. That's what they believe, that's how the world started.

Anita: But, they, you know they have that legend that if you want boys you go far. But they have these special chambers where women go when they are having their baby, you know, and it's sort of stupid because they know that, you know. They tell things like that and it's not true and they know it's not true.

Interviewer: So what's the point of the story, then?

Bob: It's just to show what they believe.

Marsha: Well, I don't see how they can believe it, to say that if you want a child you go out and get one, and yet they have children. They don't go out and find them in the snow or anything....

Literal interpretations such as the ones above led these particular students to develop very ambivalent, and sometimes very negative feelings toward the Netsilik:

Anita: It's all so stupid that it doesn't seem that it's real, you know.

Marsha: Most Eskimos, it just didn't seem that they could follow their taboos. It just wouldn't work out, because every time they break them, they really.... nothing really does happen. It was unbelievable. They should be able to see that nobody really does attack them.

From the interview extracts, it is apparent that these children did listen to each other, that they built on each other's ideas, and felt free to express opinions. They were extremely capable in the give and take of discussion. While they grew in skills of communication, however, they carried away from the course a distorted picture of the Netsilik, seeing them as strange beings who explain life processes in incomprehensible ways. There was no evidence that any comparisons with the beliefs

and myths of our own culture had been developed or that the teacher prompted discussion of myth in terms of its human function. This case illustrates the extremes of "process" learning and cognitive confusion; however, a different case can easily be imagined, where building conceptual grasp was stressed to the exclusion of exploring emotions and sharing feelings. These illustrations suggest the following questions the teacher might ask of students' interview responses:

1. Do children really feel free to express their attitudes about human behaviors?

2. Do they support personal opinion with knowledge?

3. Do they use knowledge in developing value judgments?

4. Do they, despite specific knowledge, "miss the point" of some organizing ideas such as the function of myth?

5. Especially where values are concerned, do they need to explore more general and comparative problems in order to develop an organizing idea?

6. By probing children's developing attitudes, does the teacher gain understanding of the effects of his own teaching?

Interview Follow-up

In analyzing interviews along the four dimensions above, keep in mind that the questions children raise while they are being interviewed provide a good source of information about areas of the material which are difficult for students to grasp or which are particularly intriguing to them. The following questions were raised by three students who had been interviewed regularly over the course of one school year:

On Innate and Learned Behavior:

> What I don't get is when they give a warning call, and a little baby is over there and I'm here, would the baby know enough to go to its mother? Or is it instinct or urge or what? Does he know the call?

On Reproduction:

> (Is there anything else you would have wanted to know more about?)
>
> How they....how the animal [baboon] reproduces offspring. ....Well, in the salmon we saw how they did that, and herring gull, it showed how they....out of the neck, you know. But the baboons, it just showed....the first film we saw, that was the only thing we knew about it, when the young baby cried for his milk and got it, but it didn't show how they did it, you know....it didn't show if the female just did it alone, or with the male helper, or what.

On Natural Selection:

(If an animal's environment changes, would the animal have to change in order to survive?)

Yes. It would take many centuries, but he probably would.

(Could you give me an example?)

Say the giraffe. He's used to eating off the high trees. In a year, all the trees are dead and they're all down on the ground. Sure, they can spread their front legs to put their head down, but it hurts after about an hour, so they'll just have to get a shorter neck after many centuries. That's what I don't get. How they get a smaller neck....Someone takes a sledge hammer and hits him over the head?

In analyzing the interview, the teacher might ask:

1. Do the students raise any questions? If not, do students need to be supported toward more reflection during the interview?

2. Are the questions raised simply requests for additional information, or do they reflect a need for further clarification of the basic concepts?

Let's assume that you have listened to your taped interviews and have heard not only some delightful insights and elaborations of ideas, but also some clear misconceptions and confusions in certain areas. If you have been a good interviewer, you will have let these pass in the interview itself. However, follow-up classwork on troublesome areas is now possible; and where individual students are having problems, you are alerted to this and can make special suggestions for reading, viewing of films or doing projects. You may also want to set up a situation in which students who have demonstrated considerable mastery of a concept could work with the students who are having more difficulty.

Another follow-up suggestion is to let the interviewed groups play back their own or other groups' tapes. At this time, they could try to improve their ability to learn by listening to others by:

1. picking out the examples given on a topic

2. assessing the examples and other information given for accuracy

3. assessing students' patience in letting others finish their thoughts

4. listening for whether classmates either build on each others' thoughts, or ignore them.

As Urie Bronfenbrenner has pointed out,

> ....surely the most needed innovation in the American classroom is the involvement of pupils in responsible tasks on behalf of others within the classroom, the school, the neighborhood and the community.[2]

Here at least is one way to begin.

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[2]Urie Bronfenbrenner, Two Worlds of Childhood: U.S. and U.S.S.R. (New York: Russell Sage Foundation, 1970), 156.

Classroom Environment Checklists

How do we help children develop an awareness and critical judgment of dimensions that create different class environments, and how can teachers use a youngster's judgment and preferences to create class environments that are joyous, productive, reflective, and sharing, as against those whose results are ennui, anxiety, squabbles and divisions among students and teachers?

One suggestion is to use the opinion survey* presented in this section. The opinion surveys give questions that could be asked during the Animals materials, and those that could be asked as the Netsilik study is drawing to a close. As teachers will see from the dimensions questioned -- feelings toward the course, activities that promote ease of learning, those that seem to make learning difficult -- these checklists are meant to direct children's and teachers' attention to several factors, and to encourage children to evaluate their own ways of learning and contributing to the class. We want to give youngsters the opportunity to develop more of a sense of responsibility for the environment of the classroom, and a greater chance to influence the emphases given to certain activities.

There are clearly a number of options for reviewing the checklist and organizing the class for this review. We suggest as the mechanics of using this form:

Group children into three or four working groups.

2. Introduce the checklist as a way for them to think about their attitudes, and about any special successes or problems of learning. The checklist should be considered as a chance for students and teachers to discuss together the way Man: A Course of Study is working in the classroom.

3. Children may fill out checklists individually, then, in small groups, collate their answers.

4. Prepare a total class tally from group responses. This total response can then be the basis for class discussion. For example: What were some of the reasons behind students' choices? What is it that makes certain ways of learning difficult, others easy? If a few students and the teacher seem to be dominating discussion, what can we do about this?

An evaluative dialogue between teacher and students can provide stimulating and thought-provoking feedback about the dynamics of the class and the course. One teacher who found checklist feedback of value, commented:

> Oftentimes what we think we're doing in teaching just isn't true.

---

* These can either be duplicated from this volume or ordered from the course publisher, Curriculum Development Associates.

In addition, by drawing out feelings of class members who seem to be unhappy in the course, or who find difficulty in group work or inquiry projects, the teacher will be able to gain insight into these youngsters' discontents and problems. In planning, the teacher can then take these difficulties into account, perhaps by planning more individualized projects for the youngsters who do not share the enthusiasm of the majority for interactive verbal learning.

Are there any patterns of response that teachers might expect to see that appear to be "norms" for this course? Clearly, the classroom as students perceive it will reflect the special emphases and style of the teacher. In large-scale administration of these checklists, however, we have found some pronounced student responses to the course. We will briefly outline these patterns to give the teacher some profile against which to compare the responses of his class. We want to stress that certain clusters of preference or activity are not "givens" defining the "best" classes, but rather, indicate what large numbers of children have found to be difficult or easy when learning, and to show how most classes have focused their activities. In a national polling of students via the checklist, several dimensions of learning were defined:

Ease of learning. The activities that make learning seem easiest are the visuals (particularly films), some aspects of discussion (listening and talking), group work and projects.

Difficulty of learning. The activities that make learning seem difficult are "having to tell others my opinion" (an aspect of discussion that can require use of information and evidence) and doing written work. Later in the course, the difficulty of expressing an opinion markedly decreases. (This growing skill is noted by teachers, who comment frequently that increasing children's ability to communicate ideas effectively is a major achievement of Man: A Course of Study.)

Source of learning. Reading the booklets and watching the films are consistently cited as the two main sources of learning. In interviews, children make an important distinction between materials that carry themes and information of the course, and activities by which one explores these materials. Children view interactive work such as discussion and games as an aid to better understanding, not as the major mode by which information and concepts are conveyed.

Center city and suburban differences. Youngsters in the city report spending considerably more time "doing projects and drawing" than do suburban youngsters. Discussion and small group verbal work are more frequent in the suburbs. In general, there is similarity among all types of Man: A Course of Study classes, however.

Boy-girl differences. We found minimal differences in preference for materials or in learning styles. Slight differences in personal assertiveness do appear -- boys express less outward attentiveness and more independent thinking than do girls; they think a lot more about animals, and yet are less "interested," more "bored," listen

less to what is being said in class and feel they learn fewer new things than do girls. These seem to be psychological differences, however, for interview and test results do not show girls to be more knowledgeable or involved in course issues.

Working arrangements. Small group work and the dyadic pattern of working with one friend are overwhelmingly preferred to solitary endeavors; only one student in ten likes to work best with the teacher's help or in one big group. This reflects the concerns of this age group, where task accomplishment in company of an intimate age-mate is a particularly satisfying way of working.

OPINION SURVEY
Animals Section

Name:_____

Date:_____

The following questions ask for your opinions about Man: A Course of Study. This is a chance to think about what you have been studying and how you feel about this class. After you have answered the questions as honestly as you can, you will be able to share your opinions with your classmates to find out how they feel and how they best like to learn.

1. To describe my class during the Animals section, I would use the words: (Check 2 answers)

   _____easy

   _____confusing

   _____makes me think

   _____fun

   _____hard

   _____not very important

   _____my favorite subject

   _____boring

   _____other (What is it?_____)

2. While studying the Animals material, I like to work best: (Check 1 answer)

   _____alone

   _____with one friend

   _____with the teacher's help

   _____in a small group

   _____in one big group (with the whole class)

3. When studying the Animals section, I find it hard to: (Check 3 answers)

_____understand the opinions of others
_____draw pictures
_____work in small groups
_____discuss with my classmates and teacher
_____understand some of the booklets
_____understand the pictures, slides, films
_____do written work
_____express my own opinion
_____make charts, do projects
_____learn the new words used in this course
_____other (what is it?_____)

4. Learning about animals is easiest when I: (Check 3 answers)

_____listen to the opinions of others
_____draw pictures
_____work in small groups
_____talk with my classmates and teacher
_____understand some of the booklets
_____understand the pictures, slides, films
_____do written work
_____express my own opinion
_____make charts, do projects
_____learn the new words used in this course
_____other (what is it?_____)

5. Which do you enjoy doing the most? (Check 2 answers)

_____making environment boards
_____doing observation projects
_____reading booklets
_____watching films
_____talking about your ideas in class
_____working in a small group
_____doing worksheets
_____answering questions
_____listening to the teacher
_____asking questions
_____other (What is it?_____)

6. I have learned the most about animals from: (Check 3 answers)

_____reading the booklets

_____doing projects like the environment boards

_____watching films and slides

_____listening to the ideas of my classmates

_____asking questions

_____listening to the teacher explain things

_____taking part in small group discussions

_____taking part in whole class discussions

_____writing answers to questions

_____writing stories or reports

_____other (What is it?_____)

7. When the class is studying the Animals material: (Check 1 answer)

_____a few boys and girls do most of the talking

_____the teacher does most of the talking

_____the teacher and a few boys and girls do most of the talking

_____both the teacher and the whole class talk about the same amount

8. To do well in Man: A Course of Study, I have to: (Check 3 answers)

_____read well

_____be able to think of a lot of good examples

_____memorize all the facts in the booklets

_____ask questions

_____take part in class discussions

_____remember everything the teacher said

_____agree with the teacher

_____have my own opinion

_____write well

_____do extra projects

_____be able to understand and remember the films

_____try to be as quiet as possible

_____bring in extra information about the animals we are studying

_____answer a lot of the teacher's questions

_____other (What is it?_____)

9. When I ask a question while studying the Animals section, I feel: (Check 2 answers)

_____curious

_____smart

_____shy

_____nothing special

_____mixed up

_____dumb

_____comfortable

_____scared

_____important

_____other (What is it?_____)

10. While studying the Animals section, I have been: (Check 1 answer)

_____wishing we could go more slowly

_____wishing we could go faster

_____finding that we go along about right -- not too fast and not too slowly

11. Beside each sentence below check whether you agree or disagree with what it says.

Agree	Disagree	
_____	_____	Only anthropologists learn from observations.
_____	_____	My classmates often have good ideas to share.
_____	_____	I don't trust my own opinions.
_____	_____	It is hard to learn something new unless it is explained to me.

OPINION SURVEY
Netsilik Section

Name:_____

Date:_____

Here are some more questions which will help you think about what you have been studying and the kinds of activities in which you have been taking part. After you have answered them, you will again have a chance to compare your reactions with those of your classmates.

1. Compared with the Animals material, the Netsilik Eskimo material is: (Check 2 answers)

   _____harder

   _____more interesting

   _____more fun

   _____easier

   _____more confusing

   _____more important

   _____less interesting

   _____other (What is it?_____)

2. If I had to describe studying the Netsilik Eskimos, I would use the words: (Check 2 answers)

   _____easy

   _____confusing at times

   _____makes me think

   _____fun

   _____hard

   _____not very important

   _____boring

   _____my favorite subject

   _____other (What is it?_____)

3. When studying about Netsilik Eskimos, I find it hard to: (Check 3 answers)

_____understand how to play the hunting games

_____understand what is happening in the films

_____remember what I see in the films

_____understand what I hear on records

_____take part in class discussions

_____understand some of the booklets

_____explain to the teacher what I am confused about

_____ask questions

_____express my own opinions

_____remember what I have read in the booklets

_____learn the new words used in talking about Eskimos

_____other (What is it?_____)

4. So far I have learned the most about the Netsilik Eskimos from: (Check 3 answers)

_____reading the booklets

_____seeing films and slides

_____listening to the ideas of my classmates

_____playing hunting games in class

_____listening to records

_____taking part in small group discussions

_____taking part in whole class discussions

_____listening to the teacher explain things

_____making things such as tools

_____drawing maps and pictures

_____acting things out

_____other (What is it?_____)

5. Since I started studying about Netsilik Eskimos, I have been: (Check 3 answers)

_____wishing we could go faster

_____wishing we could go more slowly

_____learning a lot of things I never knew before

_____unable to understand why we are studying about Eskimos

_____asking questions

_____wanting more reading

_____looking for extra information on my own

_____wishing we wouldn't have to do so much writing

_____wishing we wouldn't have to do so much reading

_____answering the teacher's questions

6. While studying about Netsilik Eskimos, which of the following have you liked the best? (Check 3 answers)

_____playing the games

_____using Eskimo cards

_____reading the booklets

_____writing reports

_____watching films

_____discussing things about the Eskimos

_____making things such as tools

_____listening to records

_____drawing pictures or maps

_____acting out stories

_____other (What is it?_____)

7. While studying about Netsilik Eskimos, I like to work best: (Check 1 answer)

_____alone

_____with one friend

_____with the teacher's help

_____in a small group

_____in one big group (with the whole class)

8. When the class is studying about the Netsilik: (Check 1 answer)

_____a few boys and girls do most of the talking

_____the teacher does most of the talking

_____the teacher and a few boys and girls do most of the talking

_____both the teacher and the whole class talk about the same amount

9. From studying the Netsilik Eskimos, how well do you feel you know what it is like to be a Netsilik? (Check 1 answer)

_____very well

_____somewhat

_____not well at all

Creative Formats

> We hear much nowadays about the cultivation of the child's "imagination." Then we undo much of our talk and work by a belief that the imagination is some special part of the child that finds its satisfaction in some one particular direction -- generally speaking, that of the unreal and make-believe, of the myth and made-up story. Why are we so hard of heart and so slow to believe? The imagination is the medium in which the child lives.[1]
>
> Imagination: creative ability, ability to confront and deal with a problem; resourcefulness
>
> Webster's Seventh New Collegiate Dictionary

We are going to let the children's work speak for itself. We present here art, poetry, observations, stories -- certainly not the whole gamut, but still some representative creations by which children express beauty, humor, puzzlement, joy, sadness, and acuity of perception in response to Man: A Course of Study.

There cannot be too much opportunity provided for children to express their feelings and their observations while studying this course. Other ways developed in this Handbook of reflecting about learning have not emphasized exercises that required discursive writing skills because youngsters of this age have so much difficulty in presenting what they know in this format. But the course affords countless opportunities for children's writing. We are suggesting, therefore, that writing take the form of creative or integrative work. These expressions will reveal a great deal about learning in this course, and will help the teacher to understand children's developing attitudes, values, and feelings.

Since the course stresses so much discussion, sometimes it is helpful for children to have a tangible product which stands for what they have understood; these activities give children something to have and share, something that helps them recognize their own value as competent and creative human beings.

In Seminar 12 of the Seminars for Teachers, teachers examine ways of developing projects that encourage the creative, imaginative side of the children's work. Suggestions include plays, poems, illustrated short stories, comic strips, newspaper articles, games. In these integrative projects, the teacher may want to think through with children some of the criteria that go into artistic and creative work:

1. Have the children selected topics and formats that are really theirs? Topics that they really care about and feel some ability to undertake?

---

[1]John Dewey, The Child and the Curriculum/The School and the Society, (Chicago: Phoenix Books, University of Chicago Press, 1956), 60-1.

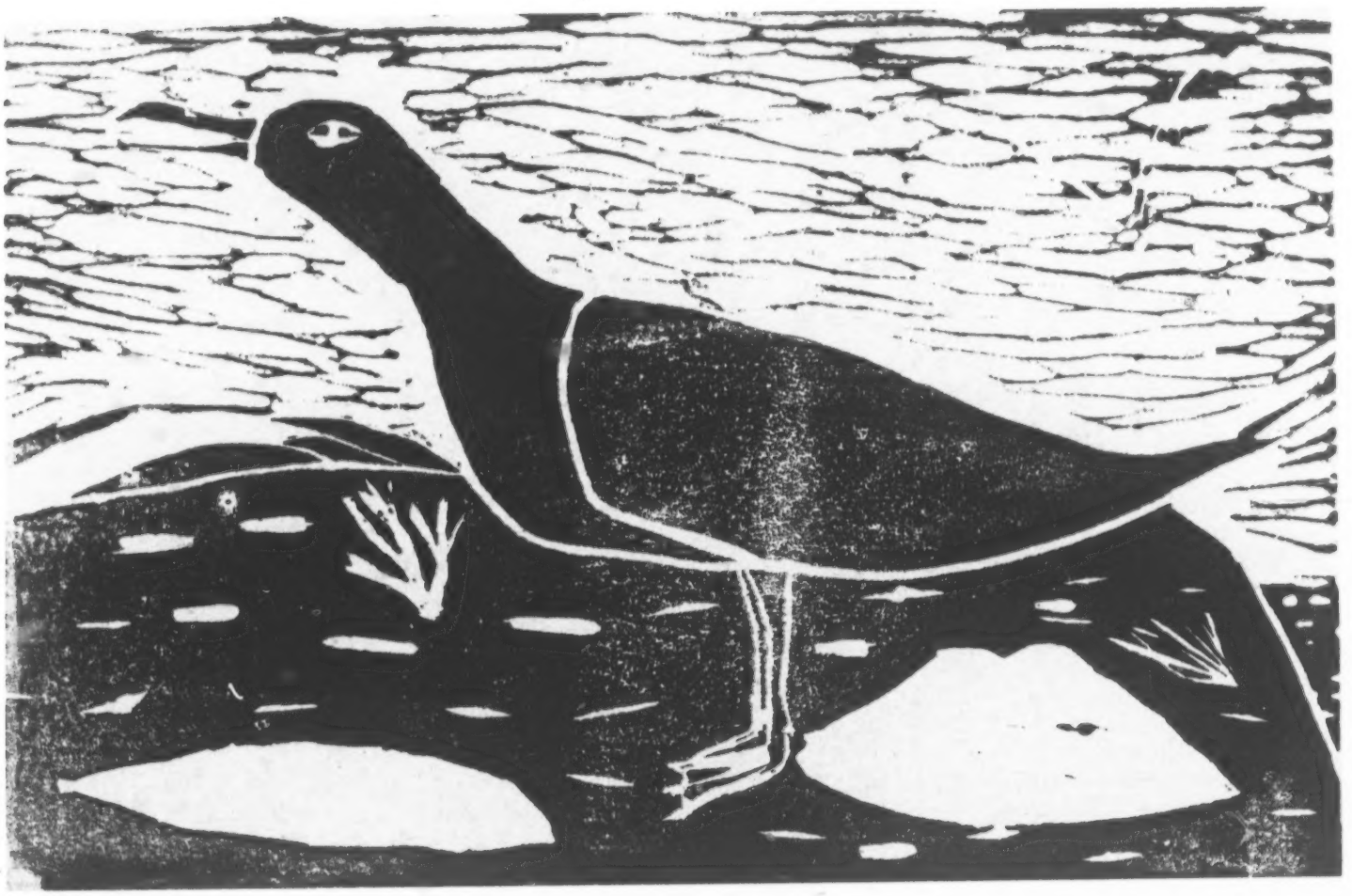
2. Have they developed chosen formats with some understanding of their basic structures? For example, is the poem really a poem? Does it convey an experience and is it a song? Does the story have a theme? Does it have a beginning and an end? Do the illustrations help us to understand the story?

Such criteria should in no sense be used as the focus of creative work, destroying spontaneity; they should, rather, be used to help children develop stylistically and gain in powers of self-expression. For the teacher, children's creative productions reveal much about feelings aroused by the materials, and about uses of information and organizing themes.

TO BE A HERRING GULL

by Jesus H. Medrano

Well here I am in an egg being ready to hatch. When got strong enough I broke through the egg shell. When I got out around me sat, a huge and different world, I called for my mother and asked her where I was, but she didn't answer. I then knew where my territory line was. I was hungry just then I felt an urge an urge to peck at the red spot and I got food. As I walked around the nest I saw other birds flying by, I just couldn't stand and watch them fly I had to try but it did no good I was to small. All I could do all day was eat and play. As time went by I had two brothers Jose and Raul, "Jose did you sleep well" and he said "Yep" but I said I didn't because I was too busy thinking about flying. Everytime my mother went by I ducked my head because I didn't want to get beat up. I was older now and one day I saw a Girl gull flying by and she said "Come on, lets fly around honey." I couldn't refuse a nice looking chick like that so I tried real hard to fly then suddenly I saw my feet lifting from the ground a new feeling got into me, at last I could fly! I was full of joy to feel how wonderful it was to fly I carved I dived and I did the summersalt. Then I started flying with the other birds in groups. Then one day my mother told me "son you are old now and must find a mate." But until I could find one I caught my own food and flew with the other birds. One day I landed right beside a female, I looked her straight in the eye then I waited no time in making my neck swell and regergitate for her as she turned around I quickly jumped on her back I knew this was the way to reproduce. After a while we found our territory and started building the nest. I said to myself soon I'll be a father. I waited a long time to be a father then one day a chick hatched and I said "I wonder what your life will be like."



BABU THE BABOON

by Lisa Alberts

The zoologist awoke in his tent, to the sound of birds and animals screeching at the tops of their lungs.

He was glad that the troop of baboons that slept at the tree by his tent had happily adopted him as one of them.

He sat up and wondered. Had it come yet? He walked out of his tent quietly, over to a bunch of females. There, in the center of the group was a female, proudly holding a 3-hour old baboon infant close to her body.

The zoologist (whose name was Dr. Lod) joyfully grabbed a notebook and pencil from his pocket and wrote: March 22, 1960, Babu is born. Has bright pink face, ears and calloused rump. Stays close to mother. Ears are very large. Fur is ink black.

Every day, Dr. Lod took notes on Babu.

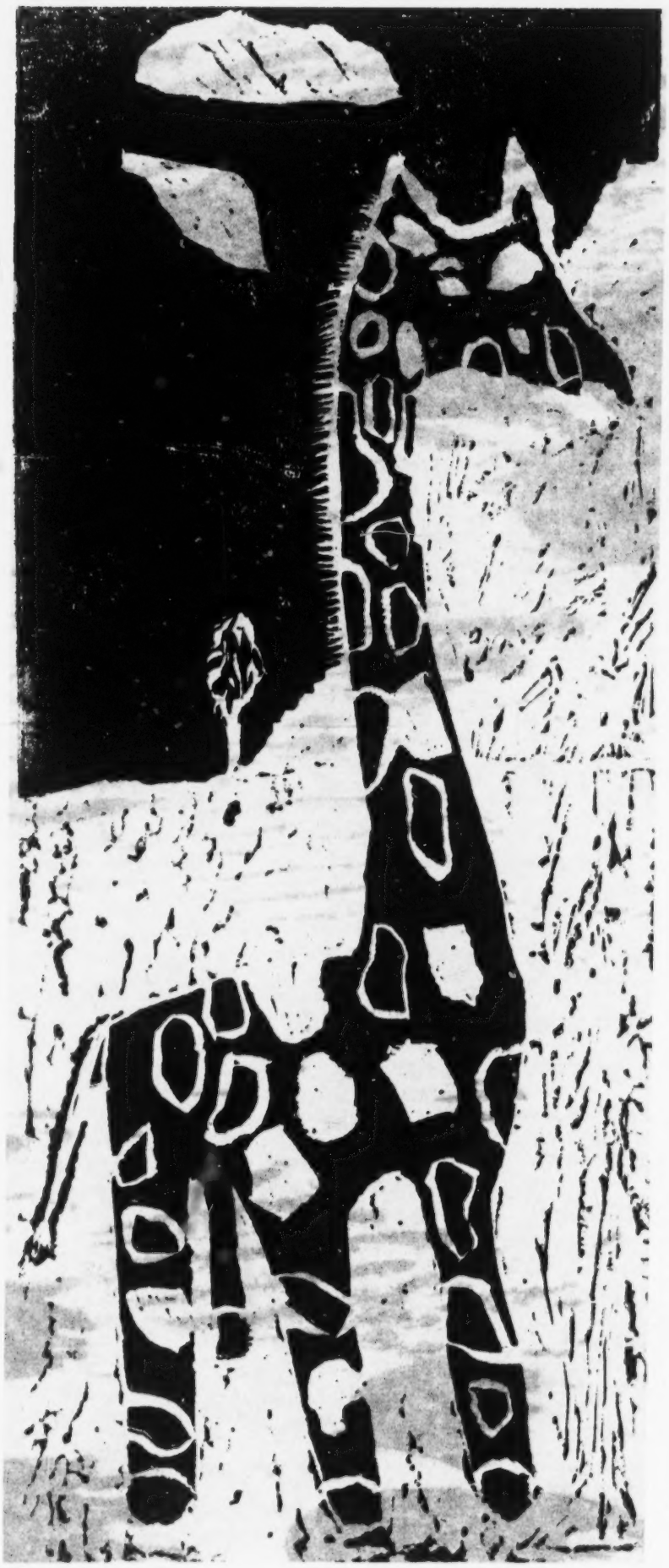
Babu soon began to wander and explore. Once, he wandered into Dr. Lod's tent, and brought a sandwich out with him. All the baboons wanted to see what it tasted like. And when Dr. Lod found out, he was quite a party pooper.

Babu liked playing with the infants, especially when they played a game something like tag. But the real fun he had was when one day, Babu was watching the 3-month old infants, riding like jockeys on their mother's backs, with a tail for a backrest. Babu climed up on his mother's back. At first, he kept sliding off, but then he got the hang of it.

Another time, when Babu was almost 1-month old, Dr. Lod peeked outside his tent. He quickly pulled his head back into the tent. He took out the notebook and pencil out of his pocket and wrote: Babu has eaten grass!

The dominant male,
Is anything but frail,
He leads the troop,
Which is quite a big group.
The juveniles play,
All through the day.
Baboons have a very
   organized life,
And always have a
   different wife.

by David Grinspoon



WITH BOW AND ARROW IN HAND

by Jan Swimmer

Fall time is here
It's time to leave the stone weir.

As we make our yearly rounds
We come to the caribou hunting grounds.

With my kayak upon my head
I face the work the lazy Tunrit dread.

I start across the barren land
With bow and arrow in my hand.

The beaters chase the caribou
That I do not alone pursue.

Even when the day is done
The fight may not have yet been won.

The sun will come up and that is when
We will go out to hunt again.

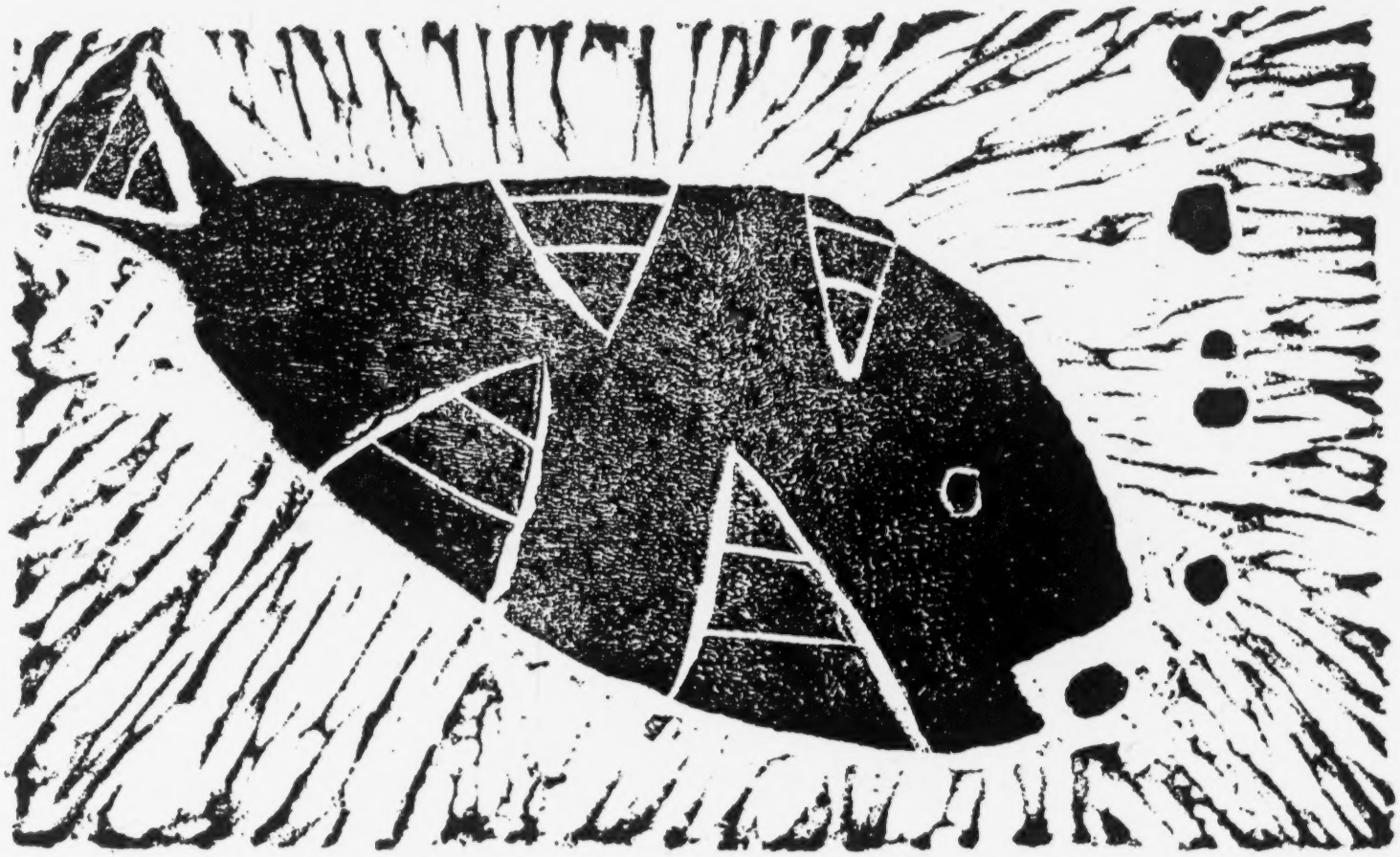
This time they came running toward us
And we killed one without much fuss.

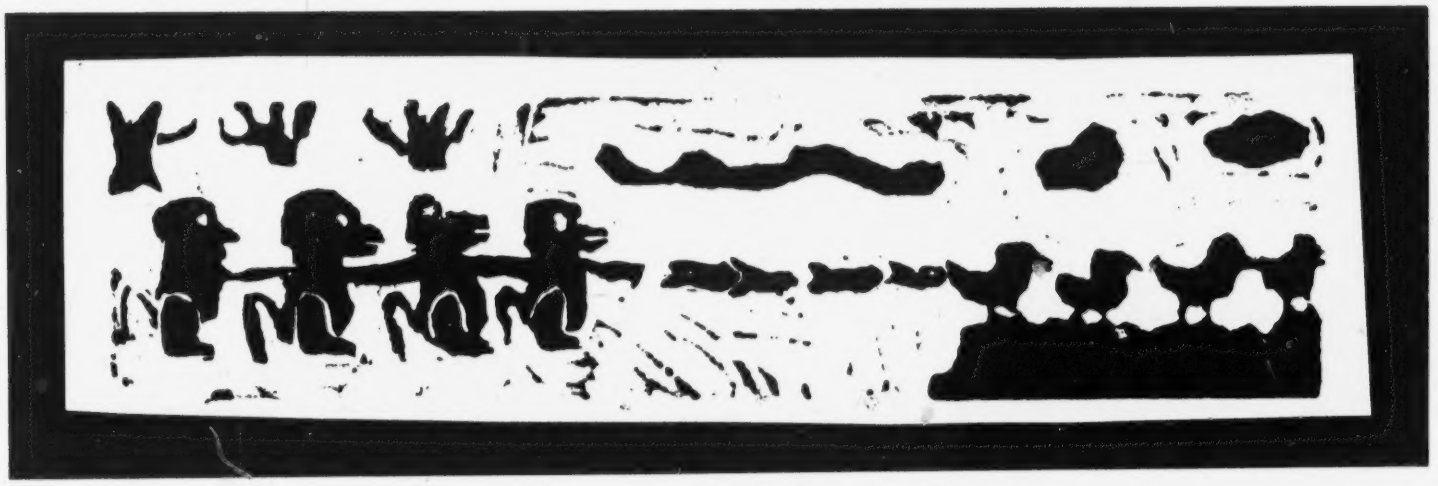
I was the first to pierce his skin
His coat was the prize that I did win.

I carried it home to my wife
And there I skinned it with my knife.

"Hooray!" said my son, for his coat so new
Was to be made of the skin of this caribou.

And when we left the hunting grounds
I had the most meat-----25 pounds.





COMBINATION OF BOTH OLD AND NEW

A Fifth Grader

The Netsilik still use tents but now the tents are made of canvas. They fish with nets instead of spears. They still use boats but now the boats are wooden and powered. The women still use pots but now they are made of metal. They still adopt but now its legally done. They still use sleds but this is wooden and they still use parkas but these are made of nylon or cloth wool. They still chuht* seals but now they use guns. The women still use stone lamps but now they have stoves to cook on. They still use ceromonial igloos but now they don't live in them. They still have ceromonial igloos but now they are used as school, church and festivals. They still cook food but now with stoves. They still have ballons but now they are made of rubber.

*shoot; we have maintained the children's spelling and punctuation throughout.

PARTNER SONG

by Howard Cohen and Jim Snider

Jimtok, my pudgy friend,
You caught not one seal this year.

Hiwatuk, I haven't caught one seal yet
But you caught not one caribou this year.

Is hunting all that you can do?
How good are you when it comes to tools?

Very good am I in tools.
Can you make a kayak in less than two hours?

My kayak is better than yours will ever be.
And how good are the clothes made by your wife?

Let us stop talking now for it is getting late
And I am getting sleepy.

There is another one of your faults
Jimtok, you cannot stay (yawn) awake!

THE HUNTER

by Richard Javve

I am Itimangnark. I'm standing at the seal hole waiting. Though the cold freezes the marrow in my bones, I wait. I know that if I do not return to the winter quarters my family and my life long partner, Right Side, will go hungry so I wait for the slight rippling that is the difference between life and death. I will wait as long as I have life.

THE HUNTER

by Brian Millen

I am Itimangnark. I am leaving my home to hunt seal. My dogs have found a seal breathing hole and am I lucky! As soon as I put the hair on the bone a seal came. I took my spear and speared him through the nose and I mean nose! When I came home my family were all in the igloo. We had a feast and enjoyed ourselves with games.

THE OLD WOMAN

by Ned Wasserman

I am Kigtak. I am not afraid to stay out on the ice. I know that this is the way other old people die. I do not expect my son to wait for me. That is our custom.

THE OLD WOMAN

by Sheri Rist

I am Kigtak. I have been out on the ice for days. I am tired and lonely. I keep hoping they will come back but they don't. Sometimes I get mad and say to myself I shouldn't have raised her, but then I soften up and I'm glad that I did. Then other times I think it is right what they did and I should kill myself. Then I get scared and stop. Then I see the camp and don't think I can make it but I do and so I go on and on.

STILLNESS
by Lisa Albert

Everything is still.
A lone wolf howls in the wind, yet
The whole world seems as quiet as
The birdless skies, and
The one wolf howling in the wind.

CARIBOU
by Jeff Bolotin

Caribou, caribou,
Come to me.
Your fur so soft,
So warm.
Your meat so sweet.
Yes caribou,
You, you,
Come to me.
I need you,
Go into the water,
Your soul shall not be hurt.
Come caribou, come
Come to me.

BIRTH
by Linda Graham

Birth is babies,
With pink faces.
And fathers with cigars.
The colors of babies
are pink and blue.
Girl babies are sweet,
Boy babies are cute.
I love little tiny babies,
I think you do too!

BIRTH
by Louis Massaur

Birth is a baby sweet and kind,
Birth is father and mother and cigars;
Birth is twins boys or girls
And birth is a car going 60 miles an hour;
and a policeman stopping you and you tell him and
he gives you a ride.

BIRTH
by Dawn Deegan

When a new one is born,
Happiness is born too,
Some people are happy,
And some are sad,
But all I know is that I'm awful glad.

MOTHERING

by Marlene Lewandowski

How wonderful a mother nursing a baby.
What a sight to see.
They teach them and tell them about danger.
Some don't bother but some do.
Oh, I think it's wonderful.

The Eskimos life is hard
and tough.
The wind has no pity
the waters are rough.
Their struggle for life is
not very mild,
It never is, in the life of the
wild.

by Julia Green

SEAL SONG
by Alexis Rosenoer

Come up,
Come up to the soft air.
A-h-h-h
So clear
So soft
White clouds above.
The wondrous world on top.
Soft white snow
Cool, crisp air.

Breathe,
Breathe soft air
Breathe low hills
Breathe sweet air.

Love
Love the air
Love the low hills
Love the white snow, crisp and sparkly
Love the gulls up above--

But be careful!

Content Questionnaires

Different psychological factors in learning seem strongly operative in Man: A Course of Study. One is an instrumental factor: reinforcement of an idea or concept through various media of presentation and by repetition and reappearance of themes. These reinforcements result in consistency of student learning in the Animals section. Another factor, the emotional responses aroused by the Netsilik content, results in diversity in student responses to these human materials.

In the Animals section, the emphasis is on several main concepts -- life cycle, parenting, behavior (innate and learned responses), etc. -- repeatedly explored through different animal studies. The information and ideas are open to investigation through manipulative activities, verbal expressions, and visual images. The organization of a baboon troop, for example, is described in a booklet, viewed on film, and re-created in a class exercise of cut-outs and labeling. The most consistent informational learnings were shown where this pattern of reinforcement was developed.

The Netsilik material is richer, yet more diffuse. There are no concept books such as Animal Adaptation. The films, records, books, and games are widely different from each other in content and style. There is some overlap, but to nowhere near the degree we find in the Animals materials. The Netsilik materials are not organized around a few, constantly reinforced themes. The sequence follows the Netsilik around the yearly cycle of life activities, interspersing specific skills topics, such as diagramming and categorizing, among the more narrative, descriptive, or interpretive investigations. It is organized around a life style, and all its implications. The total environment -- physical and metaphysical -- is explored. The Netsilik units contain a greater range of materials and demand more synthesizing on the part of students because the concepts, although embedded in the films, books, records, games and exercises, are not specifically spelled out for them.

What we have tried to do in content questionnaires* is to provide a series of items open to the quite different strengths of both sections of the course. We developed the versions of content questionnaires given in this Handbook by subjecting several versions to the formal analytic procedure of item analysis, checking the difficulty level of the items and their discrimination power (if more low-scoring than high-scoring students on the total questionnaire do well on one particular item, it may well be that the item is not consistent with the rest of the questionnaire and thus is a poor item).

The most important "testing" of the questionnaire, however, occurred in classroom situations. We took several questionnaires into several different classrooms, asked students to work on them and then to discuss the items with us. From their suggestions, their understanding of directions and wording, and their ingenious reasons for interpreting questions in certain ways, we refined our work into the present format.

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*Printed copies are available from the course publisher, Curriculum Development Associates.

We also became convinced that the truly productive way of using such content-oriented items in Man: A Course of Study classrooms is as the basis for follow-up discussion. We learned far more in the discussion following the administration of the questionnaire than we did by simply looking at student responses. The meaning and extent of children's learning became apparent as we talked it over. From this experience, we would suggest that crucial to evaluation in this course is the use of the content questionnaire not as an end result, but as a basis for further exploration of the issues raised.

If teachers need to use these results to arrive at some kind of grade or score, we have keyed the questions on the page following each questionnaire as we would score them. Note that we have keyed all items on the Animals section questionnaire, but have omitted keying several items on the Netsilik questionnaire for these clearly can have no one best answer but are intended only as triggers for discussion of some important aspects of the course.

The questionnaire developed for the Animals section contains the following types of items:

1. Simple information and definitions, including vocabulary (question 14)

2. Knowledge of human and other animals' behavior (questions 5, 6, 7, 9)

3. Ability to interpret simple graphs and to draw conclusions from the information (questions 2-4)

4. Understanding of basic concepts of the course (questions 8, 10)

5. Ability to make comparisons and distinctions between man and other animals (questions 1, 12)

6. Ability to reason from the information given (question 13)

7. Ability to use evidence to predict behavior (question 11)

Considered in this way, student responses to the questions can give the teacher insight into areas of difficulty, and areas where considerable understanding and knowledge have been gained. The questions were designed to include a wide range of types; an understanding of children's learning in the course cannot be based upon one or two questions. After using these forms, the teacher and class may feel that there are important areas of the course that are not tested, and the teacher may want to add some new items or develop a new kind of questionnaire altogether.

The Netsilik questionnaire is organized around the following themes:

1. Understanding some specifics in the Netsilik way of life (question 1) and being able to interpret these specific

behaviors in a context of an organizing framework, e.g. rules of society, myths, spiritual and physical needs (questions 2, 3, 7, 8)

2. Comparison of Netsilik ways and our own (question 4), comparison of learning in humans and baboons (5)

3. Deduction and reasoning from evidence based on knowledge gained in the course (question 6)

Children's responses can be viewed from these perspectives, as well as on an item-by-item basis. For the benefit of children who aren't readers, teachers may want to tape the questionnaires and let the children listen to the questions as they read them. However, we've been surprised at the reading ability in this course of youngsters who usually "aren't readers" so the teacher may want to try the written format first.

The questionnaire could also be given as a small-group project, where members of a group could arrive at their answers as individuals and then discuss responses within their group. After student discussion, the teacher may want to give students our "best answers" to compare with their own, and then participate in a critical review of choices. Or students could reply to just a few questions on any one day, and then spend time in whole-class discussion of their answers. Use of the questionnaire for formal grading purposes is of course open to the needs of each teacher. The most fruitful use of the questionnaire, however, is as a focus for discussion and as a diagnostic indicator for both students and teacher.

Many schools have ~~seen~~ the richness and complexity of Man: A Course of Study as a means of eliminating the traditional grading system and of developing a view of evaluation as an integral part of the curriculum under study. However, for the teacher who uses the questionnaire as a traditional measurement tool, as well as a diagnostic and discussion technique, Questionnaire I is considered below, using our field testing experience as background. (Questionnaire II, covering the Netsilik material, is a newly developed instrument, drawn from several versions of previous forms and containing items not included in versions used during the large scale field testing. We are not able, therefore, to provide normative information for this questionnaire. In any case, the teacher may want to keep in mind that we found the most consistent course learning during the first half of the course, and more personal interpretations developed in the second half.)

The following guidelines have been prepared to give teachers a context for considering scores of children in different settings and of different ability levels. By comparing the normative table below (which was compiled from the responses of 1669 students) with a student's raw score, you can determine his percentile ranking. The class average is computed in the same way.

Raw Total Test Score	Percentile
53	99
47	90
44	70
40	50
37	30
32	10

The percentile equivalent for a score of 37 is 30; for 44, 70; for 50 (using interpolation), 95. Guessing the percentile equivalents for intervening scores is quite accurate; but in fact we did not compute percentile equivalents for all possible raw scores because we did not wish to convey an artificial sense of preciseness. The reliability of scores, the degree to which you can put faith in the exact score, is never very high. A student's score would probably vary several points if he were to retake the questionnaire or another similar to it.

The scores and percentiles given in the illustration demonstrate why too much reliance on a specific score can be a mistake. For a score of 37 a student is at the 30th percentile (higher than 30% of the norm group and lower than 70%) while a student with a score of 44 has a percentile of 70. In other words answering correctly seven more items changed the student's position 40%. If a student had answered two more items correctly, you can see how it would have changed his standing. There is a fine balance to be achieved between the extremes of being mesmerized by the numbers and ignoring them altogether.

This is not an easy questionnaire; the reading ability, the conceptual demands and problem-solving required by this instrument are considerable. Some teachers ask if scores of students in urban settings are similar to those of students in suburban settings. While there are some differences the more important point is that these differences are minimal. Before using this normative table for interpretation, the teacher may, however, want to consider several useful modifications to accomodate these differences. The students in our normative group came from a range of schools which we, for purposes of facilitation, classified into three groups: urban, mixed (the urban periphery or small cities) and suburban. For a class in an urban school system add four points to each student's raw total score before converting the scores to percentiles. (In our normative group students from urban schools scored on the average four points lower on the questionnaire than did the other students. Adding four points adjusts this difference.) No school system adjustments are necessary for suburban and mixed settings.

Another correction that can be made concerns the measured ability of your students. For your students whose tested ability would place them in the lower third of the class, you should add five points to

the students' raw scores before converting to percentiles. On the other hand, for your students who are in the top third, you should subtract three points before converting. This adjustment can be made regardless of school system setting.

Some of you may wonder about making these suggested adjustments in the conversion of raw scores to percentiles. In evaluating the course, we found from pre-tests that students of different background and different abilities bring different amounts of knowledge to the course.* We are suggesting that you use this form of double raw score adjustment as a substitute for pre-testing. With these adjustments, you can make allowances for the fact that students start at different levels of knowledge; you will have a common yardstick with which to evaluate growth. As with any testing system, this one may appear to have more precision that it actually does; however, it seems safe to assume that all students, regardless of background, whose adjusted scores are at the 50th percentile, have shown an equal amount of learning as determined by the questionnaire, while those at the 70th or 90th percentile have learned more. Two cases may help to illustrate. Let's assume that one student from a suburban setting has an I.Q. score placing him in the lower third of his class. If he scores 35 points on the test and the teacher wants to compare his growth with national norms, five points are added to adjust for measured ability; the score of 40 is converted to a percentile by using the previously given conversion table, and we find that the child ranks at the 50th percentile in terms of growth in learning. Another student comes from an urban classroom and has a raw test score of 39. His measured ability places him in the top third of his class; adjusting for measured ability, we subtract three points, bringing his score to 36. However, making the adjustment for urban setting would add four points, giving him a final score of 40, or a 50th percentile ranking. Thus, both students have shown similar growth in learning despite different raw scores.

There are several research findings that you might find useful when thinking about this questionnaire. Children did learn a significant amount of information and developed in ability to reason using the materials. Where differences do appear, there is a tendency for learning gains to be higher for fifth graders and ungraded classes than for fourth or sixth graders. The unit has neither a male nor female learning bias in its effectiveness. Learning gains are not associated with students' intelligence or previous knowledge of the area. Those students with poorer academic background, found so often in the center city, gained in learning and mastery over the ideas and concepts as much as those whose beginning positions were much stronger. On the other hand, the improvement of these students was not secured at the sacrifice of the most knowledgeable students, for their gains were equally large. And finally, the differences that were found among school systems at the beginning of the program tended to be reduced by the end of the unit.

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*Further, through the use of post-tests we have seen how much each of these groups learns, as demonstrated on these particular instruments. The amount each group learns is surprisingly similar. The average gain in points for the urban students was 10; for students from mixed systems 10; and for suburban students 12. It was 11 points for high IQ students; 10 points for middle IQ; and 10 for low IQ students.

Name:_____
Date:_____

QUESTIONNAIRE I
Animals Section

In this questionnaire, you will have the chance to use some of the information in Man: A Course of Study. You will also have the chance to think about the ideas in this course. We hope this will be fun to do and will help you to see how much you know about man and other animals. Probably the best part will come after you have answered the questions. Then you, your classmates and your teacher will be able to discuss the questions, and decide why you selected certain answers.

1.) On the list below are 7 things that happen during the lifetimes of animals. Some things happen to all animals, some things happen just to human beings, and some happen to other animals but not to human beings. In the box beside each question, write a

1 if it is true for human beings only

2 if it is true for some other animals only

3 if it is true for both human beings and other animals

☐ a. marry

☐ b. eat

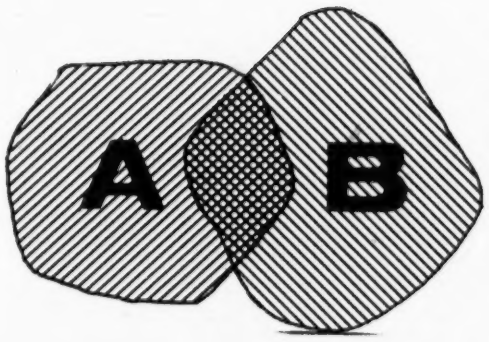
☐ c. grow up without adult care

☐ d. use a language

☐ e. protect themselves from enemies

☐ f. build fires

☐ g. tell a lie



This diagram shows the areas in which two baboon troops live. Troop A lives in Section A. Troop B lives in Section B. Questions 2 through 5 below are about this diagram.

2.) Which is the overlapping section? (Choose the <u>one best</u> answer and write its number in the box.)

☐

1.
2.
3.
4.

3.) The overlapping section is one that (Choose the <u>one best</u> answer and write its number in the box.)

☐

1. none of the animals use.
2. both groups use.

4.) Compared to the other two sections, the overlapping section is probably: (Choose the <u>one best</u> answer and write its number in the box.)

☐

1. richer in food and water
2. the same
3. poorer in food and water

5.) When two troops come together (Choose the <u>one best</u> answer and write its number in the box.)

☐

1. the larger troop would share the food and water with the smaller troop
2. the troops might be nervous
3. young baboons of the two troops would play together

6.) Baboon troops never leave their home range. This is because: (Choose the one best answer and write its number in the box.)

☐ 1. They don't want to leave sick or old baboons too far behind.

2. No one is sure of the reason.

3. They don't want other animals to get the things they have built up.

4. They are able to survive only in that special area.

7.) A salmon is able to find its way back to its birthplace because: (Choose the one best answer and write its number in the box.)

☐ 1. Some member of the group has made the trip before.

2. The parents tell the way to their young.

3. Each salmon remembers the smell of its river.

4. Salmon learn to do this by trial and error.

8.) The group life of a baboon troop allows: (Check as many answers as you wish.)

☐ 1. an adult to share meat with an infant.

☐ 2. the males to keep peace in the troop.

☐ 3. the males to hunt while the females gather food.

☐ 4. other females to help a mother with her newborn infant.

☐ 5. the males to protect the females and infants.

9.) In the box beside each sentence, write a T if you think it is True. Write an F if you think it is False.

☐ a. Many animals have a language like human language but we haven't understood it yet.

☐ b. No animal can survive after birth without some parental care.

☐ c. Male baboons protect their own offspring better than they protect other young baboons.

☐ d. When a herring gull chick looks hungry, its parents feed it.

☐ e. Baboons care for their young longer than herring gulls care for their young.

☐ f. Whenever a gull sees sticks, it wants to build a nest.

☐ g. Baboons live in troops because they like to be together.

10.) During their lifetimes, animals learn to do many things. They are able to do other things without learning. Read each sentence below. Write an "L" in the box next to the sentence if you think it is something the animal learns. Write a "W" if you think the animal could do that thing without learning how to do it.

Herring Gull

☐ a. find the edges of its territory

☐ b. peck at the red spot on its parent's beak

☐ c. crouch when in danger

☐ d. recognize its chicks by spots on the head

Baboon

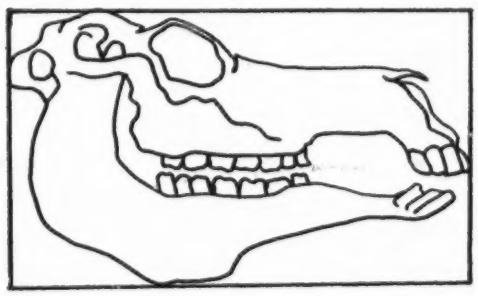
☐ a. cling to its mother's chest

☐ b. know the alarm calls of other animals

☐ c. make sounds

☐ d. know its place in the dominance order of the troop

11.) This is the skull of an animal. By examining the teeth, what would you be able to say about this animal? (Write the number of your answer in the box.)



a. It would be likely to defend itself by

☐ 1. fleeing from enemies

2. attacking and biting

b. It would eat

☐ 1. mostly plants

2. mostly other animals

c. It would be likely to

☐ 1. eat other animals

2. be eaten by them

12.) Some things can be expressed in some manner by both human beings and by other animals. Others can be expressed only by human beings. Put a check in the box beside each sentence that could be expressed only by human beings.

☐ a. Danger!

☐ b. Last summer I went to the country.

☐ c. Tomorrow we will have to get food.

☐ d. I am hungry.

☐ e. The big green monster climbed slowly out of the lake.

☐ f. I am sad.

☐ g. A stranger is close by.

☐ h. Do you know where my friends are?

☐ i. If I don't find a shelter, I will have no place to sleep.

☐ j. I am hurt.

☐ k. I have three favorite games.

13.) Read the story below. Some of the paragraphs give correct information about how a scientist would work and think. Others are not true at all. Based on your knowledge of baboons, check whether you agree or disagree with each paragraph.

	Agree	Disagree	Reason	
a.	____	____	____	It was early morning in Africa. The scientist, Irven DeVore, started out to continue his study of baboons. As he drove along, he came to an area where he saw a few trees, some low vegetation, a grassy plain, and a water hole. He decided this would be a good place to stop.
b.	____	____	____	He was looking for a new troop of baboons if he could find one. He felt that he couldn't learn much by watching the same baboons day after day.
c.	____	____	____	"I can't tell one from the other anyway. One baboon is just like the next," he laughed to himself.
d.	____	____	____	Dr. DeVore did not bring his field glasses with him because baboons are never disturbed by human beings. Even a troop that had never seen him before would allow him to come very close.
e.	____	____	____	He especially looked forward to playing with the infant baboons because baboons are so friendly toward humans.

Read the story again. Choose one of the reasons below why you agree or disagree with each paragraph. Write the number of that reason above on the line beside each paragraph under Reason.

Reasons

1. Baboons are not bothered by the presence of human beings.
2. Every baboon in a troop can be identified by the way it looks and acts.
3. Baboons are never found where there are just a few trees and some low vegetation.
4. Adult baboons all appear so alike that we cannot tell them apart.
5. A scientist cannot learn much by watching only one small group of one type of animal.

6. To get the best observations, we should not let baboons know that they are being watched.

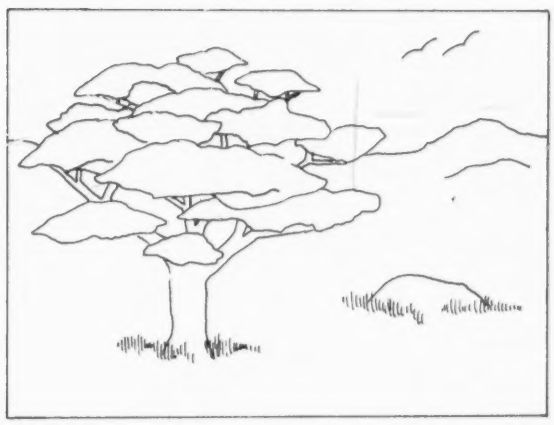
7. Adult baboons guard infants closely. They would not let a stranger near one.

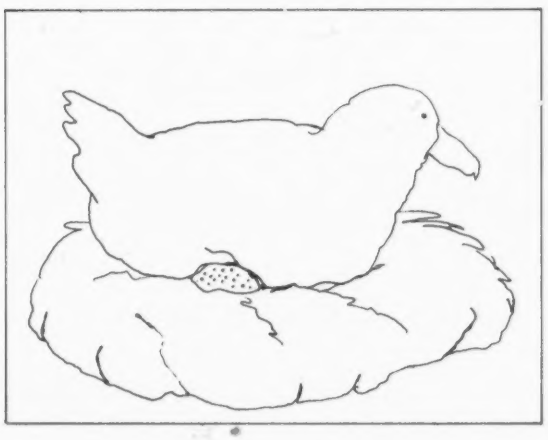
8. Troops of baboons are found in areas that provide food, water, and some trees.

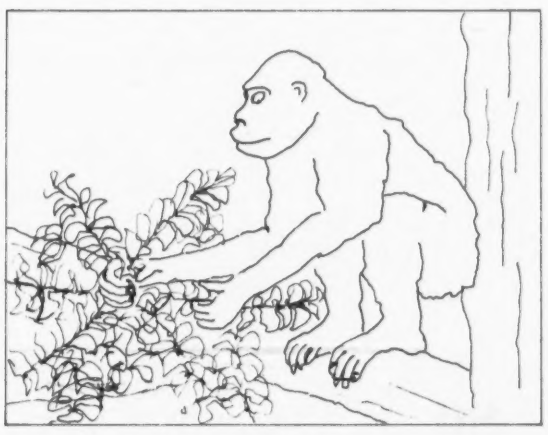
9. By studying one troop of baboons very closely, a scientist is able to learn a great deal about all baboons.

14.) In the box beside each picture, write the number of the scene that <u>best</u> describes the picture.

<u>Picture</u>







<u>Scene it Describes</u>

1. a predator and prey
2. a life cycle
3. an example of learned behavior
4. an example of innate behavior
5. an environment

15.) Beside each sentence in column I, write in the number of the sentence from column II which you think is the best answer.

I	II
___ a. a description of a structure.	1. The water is cold.
___ b. a description of a function.	2. The young male baboon stopped chasing the female when the adult male came toward him.
___ c. an example of dominance.	3. The ice kept the lemonade cold.
___ d. an example of learned behavior.	4. Herring gull parents recognize their chicks by the spots on their heads.
	5. She is pretty.
	6. A tree has roots, a trunk, branches and leaves.

16.) On the line beside each word, write the number of the definition that best describes that word.

Word	Definition
___ a. life cycle	1. a young human or other young animal
___ b. offspring	2. a mammal and a primate
___ c. juvenile	3. giving birth to young
___ d. reproduction	4. the young of any animal
___ e. human being	5. the pattern of being born, having babies, dying
	6. a jump to one side
	7. a delinquent or bad teenager
	8. the opposite of animal

Animals Section

QUESTIONNAIRE I
Key

1) a 1
b 3
c 2
d 1
e 3
f 1
g 1

2) 2

3) 2

4) 1

5) 2

6) 2

7) 3

8) 2, 4, 5

9) a F
b F
c F
d F
e T
f F
g T

10) Herring Gull
a L
b W
c W
d L

Baboon
a W
b L
c W
d L

11) a 1
b 1
c 2

12) b
c
e
h
i
k

13) a/agree/8
b/disagree/9
c/disagree/2
d/disagree/6
e/disagree/7

14) a 5
b 4
c 3

15) a 6
b 3
c 2
d 4

16) a 5
b 4
c 1
d 3
e 2

Name:_____ QUESTIONNAIRE II
Date:_____ Netsilik Section

In this questionnaire, you will be giving your opinions about things that happen in the lives of the Netsilik Eskimos. The most important part will be when you and your classmates share reasons for picking certain answers as the "best" answers. Maybe you will get some new and interesting ideas from thinking about these questions and hearing what your classmates are thinking.

1.) Read each sentence below. If you agree with what it says, check under Agree. If you do not agree, check under Disagree. When you answer the questions about the Netsilik Eskimos, think of them as they were when Rasmussen visited with them.

	Agree	Disagree
1. Using magic words and following old customs make a Netsilik Eskimo feel safe.	____	____
2. Four Eskimos working together at a crossing place can usually kill more caribou than when each is hunting alone.	____	____
3. Netsilik Eskimo children learn about Netsilik beliefs by reading books.	____	____
4. Naming an Eskimo baby is important to the Eskimos because they believe the name helps protect the baby.	____	____
5. A Netsilik woman must have a husband to survive, but a Netsilik man can live very well alone.	____	____
6. Netsilik families choose life-long seal sharing partners for their sons.	____	____
7. It is the Netsilik woman's work to sew the boots and the Netsilik man's work to keep them soft.	____	____
8. If a Netsilik is not a successful seal hunter, his family will starve.	____	____
9. Netsilik men sometimes choose friends for their seal sharing partners.	____	____
10. A Netsilik Eskimo mother is just as happy when she gives birth to a girl as she is when she gives birth to a boy.	____	____
11. Netsilik Eskimos think of hunting as a sport.	____	____

	Agree	Disagree
12. There are some people around the world who are not like Americans in any way.	____	____
13. Man and all other animals have belief systems.	____	____

2.) Several statements about the Netsilik are listed below. What does each of the following things depend upon? You may decide that more than one answer could be given, but check only one answer for each statement.

	a) Depends upon rules of Netsilik society	b) Depends upon what a person prefers	c) Depends upon what a person is able to do
1. the kinds of songs the Netsilik make up	_____	_____	_____
2. the Netsiliks' use of magic and other beliefs	_____	_____	_____
3. the activities connected with the birth of a Netsilik baby	_____	_____	_____
4. the friends Netsilik children make	_____	_____	_____
5. choosing a song partner	_____	_____	_____
6. surviving through a hard Arctic winter	_____	_____	_____
7. the Netsilik who act as leaders	_____	_____	_____

3.) How much do the following things matter to a Netsilik Eskimo in his daily life? (Check one column for each statement.)

	A Great Deal	Some	Very Little
1. the rules of Netsilik society	_____	_____	_____
2. what other people think of him	_____	_____	_____
3. what he wants to do	_____	_____	_____
4. beliefs and magic	_____	_____	_____
5. the climate and natural resources of his land	_____	_____	_____
6. what his family expects of him	_____	_____	_____
7. what he has the ability to do	_____	_____	_____

4.) If a group of Netsilik Eskimos came to visit us, some things about our lives would seem familiar to them. Other things would seem different and unfamiliar.

For each of the phrases below:

Put an F next to those things about us that would seem familiar to an Eskimo.

Put a D next to those things about us that would seem different and unfamiliar.

1. _____ The way most of us feel about dogs

2. _____ The fact that we use words to express our feelings and ideas

3. _____ The fact that different rooms in our houses have different functions

4. _____ The way we feel when a friend makes fun of us

5. _____ The fact that our parents tell stories to us when we are young

6. _____ The way most of us feel about hunting animals

7. _____ The fact that we often throw away unwanted objects or food

5.) In which of the following ways do both baboons and humans learn? Check all answers that are true for both baboons and humans.

____ 1. from their own mistakes

____ 2. by sharing thoughts with one another

____ 3. by imitating others

____ 4. by listening to a story

____ 5. by watching others

6.) Both Netsilik Eskimos and wolves hunt the caribou on the tundra. Below is a description of a hunter. Read the description and decide whether the hunter is a wolf, a Netsilik Eskimo or whether it could be either one.

I sometimes hunt alone, but I often hunt in small groups. I often chase caribou towards others of my kind in hiding. I plan on using different methods for catching caribou depending on whether I hunt the caribou on land or in the water. Some of my kind may die during the year if not enough caribou are killed.

What am I? (Check the one best answer.)

____ 1. a Netsilik Eskimo

____ 2. a wolf

____ 3. the hunter could be either a Netsilik Eskimo or a wolf

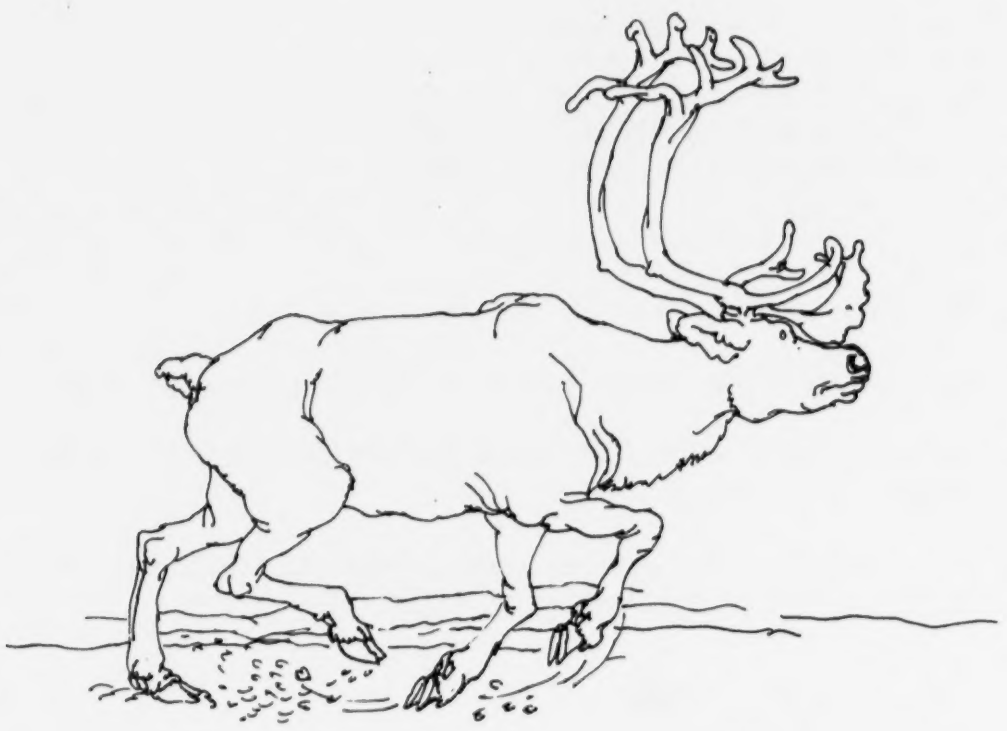
What was your reason for the answer you chose above? (Check the one best answer.)

____ 1. both Netsilik Eskimos and wolves have all the behaviors listed above

____ 2. both Netsilik Eskimos and wolves cooperate in hunting

____ 3. only man can make decisions as to which hunting methods will be most useful in a particular place.

____ 4. only wolves hunt in groups and chase caribou toward others of their kind in hiding.



7.) The Netsilik do some things mainly to meet needs of daily survival (physical needs). They do other things mainly to help explain and give meaning to their world, to feel more comfortable about life (spiritual needs). Think about whether the following activities meet mainly physical or mainly spiritual needs. Then fill in either p or s for each sentence.

1. Kingnuk covers the eyes of a fish with ashes. ____
2. The Angatok calls out the names of great hunters as a baby is born. ____
3. At the river camp the men first repair the weir, which was damaged by winter ice. ____
4. The men are very careful not to repair their tools near the stone weir. ____
5. A young hunter makes up a beautiful song about the great caribou he is going to catch. ____
6. Netsilik build inukshuks to resemble the figure of a man. ____
7. A careful Eskimo always drips fresh water into a seal's mouth after it has been caught. ____
8. A man can borrow the wife of his song partner when his own wife is unable to travel with him. ____

8.) You have read many Netsilik stories such as the one about Nuliajuk, whose fingers turned into seals. You also know the Netsilik story about the two orphans who turned into thunder and lightning. What do you think of Netsilik stories such as these? (Check the two answers that best describe your feelings.)

____ 1. They never actually happened.

____ 2. They did happen, but a long time ago.

____ 3. Stories such as these are told only by primitive people.

____ 4. They are very much like some of the stories I was told when I was younger.

____ 5. These stories help me to understand the feelings of the Netsilik about their way of life.

QUESTIONNAIRE II
Key

Netsilik Section

1) 1 agree
2 agree
3 disagree
4 agree
5 disagree
6 agree
7 disagree
8 disagree
9 agree
10 disagree
11 disagree
12 disagree
13 disagree

2) 1 b
2 a
3 a
4 b
5 b
6 a
7 c

3) no "best answers"
opinion only

4) 1 D
2 F
3 D
4 F
5 F
6 D
7 D

5) 1, 3, 5

6) 1; 3

7) 1 s
2 s
3 p
4 s
5 s
6 p
7 s
8 p

8) no "best answers"
opinion only

Classroom Observing

How can teachers get better than random and sporadic feedback about the effects of their own teaching on the life of the classroom? How can they gain a systematic understanding and some insights about the effects of techniques, strategies, and personal style? Up to this point, the evaluation methods we have suggested have emphasized student opportunities for considering their social and intellectual growth in Man: A Course of Study; and from student thinking, teachers then gain considerable information about their own teaching styles, successes or problems in developing concepts of the course, and youngsters' perceptions of class activities and environment. If the teacher wants to put his own perceptions and evaluative powers further to the test, however, we suggest the direct method of classroom observation. Through structured and periodic observing, the teacher has the opportunity to work at developing the ethnography of his own classroom, including a delineation of the roles of students and teacher in a real-life, functioning situation.

Of course, every teacher is an observer of his own classroom. But there are practical constraints. Perhaps the greatest limitation on observation is that it is difficult to be reflective while teaching. Teaching tends to absorb all of one's attention. If a teacher is very involved in presenting a lesson, he may not notice that it attracts the attention of only a minority of the class. Those children who speak often carry the ball and create an impression of widespread involvement. While one of the pedagogical goals of the teacher may be that all children participate, he may be unaware of his tendency to call on the same children repeatedly. Still another problem is that observation may be directed only at those aspects of the classroom of greatest concern to the teacher. One teacher may keep track of how well the children understand the topic, and recognize those who are having trouble; another may attend to the ways in which students relate to each other and be attuned to their social-emotional growth; a third may be concerned with encouraging children to ask more questions.

In discussing evaluation with teachers, we frequently asked them this question: What might you expect to see going on in a "good" Man: A Course of Study classroom? What kind of observable student and teacher behaviors might be taking place? The dimensions suggested by several different groups had a great deal in common. A typical list is the following:

1) teacher in non-directive role
2) teacher as resource person
3) frequent group work
4) working noise level
5) visible student interest
6) teacher and student movement around the class
7) teacher asking lots of questions
8) students asking lots of questions
9) lots of discussion and problem investigation
10) relaxed, supportive environment
11) variety of activities
12) respect for each other's ideas

13) student-to-student communication
14) activities building toward concept development
15) interrelation of goals and activities

The teachers who drew up this list were quick to point out that seeing these dimensions, and teaching in a way that makes these dimensions come alive, are two problems of different orders of magnitude. With this discrepancy in mind, we attempted to develop from our observation techniques, a framework for teachers who want to observe their classrooms in order to build toward their desired classroom environment.

A Method of Classroom Observation

Observation involves a conceptual framework for looking and listening, and for expressing what is perceived. We have developed a simple observation checklist (see page 91) for teachers' use in collecting information, along with a procedure for thinking about the data collected.

Perhaps the best observation technique is for two teachers to work as a team, each observing the other and then discussing their perceptions. This allows for a different perspective on events in the classroom, and creates an opportunity for exchanging views. Such teamwork would also be an interesting way to train a student teacher, and would be a demonstration of the master teacher's own willingness to learn and reflect.

Self-observation is possible if the teacher works with one small group of students while other students pursue their own work. This permits more time to think about teacher-student interaction by limiting the focus to a small number of children.

To conduct self-observation during a whole-class activity (guided discussion, for example), it is best to limit the observation period to about fifteen minutes, and then stop long enough to record these observations. It is important to summarize the observations and complete the checklist as soon as possible following the group work so that the most accurate impressions are noted, undiluted by a lapse of time. Self-observation may take practice to develop, since it requires a "double self," actor and observer.

A better alternative to this on-the-spot self-observation is to record the class session (or even a ten minute segment of it). While videotaping is ideal, equipment is not generally available. It is possible, however, to set up a tape recorder so that the lesson is audible upon replay. Experimentation with the specific equipment is necessary, but a good general rule is to focus the microphone on the teacher. Even if some student responses are lost, there will be a more complete record of the teacher's participation and enough clues to understand the lesson. Later, one can listen and reflect on teaching techniques and classroom atmosphere without the press of teaching duties.

Whatever the form of the observation procedure, it is valuable to have a set of criteria by which to judge the lesson. The listing of

expected behaviors given to us by other teachers would be a good start for consideration. The following observation scheme stems from our own field work. We have included those items which revealed the most about the way different classes function; it is worth noting that these correspond to the dimensions specified by other teachers. The observation form is in the format of a scale, which is to be checked after the on-going or tape-recorded class session has been "observed." Teachers may want to add other dimensions to the scale as they experiment with observing.

This scheme is suggested as only one* of many; use of Taba strategies has also been productive.

*For a report of other observational strategies used with the course, see "An Investigation of an Instrument Battery Related to the Expectancies for Student-Centered Teaching Behaviors in Man: A Course of Study," Deffenbaugh, Dalfen, and Ripple, (Syracuse: Eastern Regional Institute for Education, 1970).

CLASSROOM OBSERVATION CHECKLIST

Evaluation of the lesson

Factual questions	____:____:____:____	Opinion questions
Short answer	____:____:____:____	Lengthy response
Questions mostly from teacher	____:____:____:____	Questions mostly from students
Exchanges largely student to teacher	____:____:____:____	Exchanges largely student to student
Teacher sets and controls agenda	____:____:____:____	Students initiate topics of discussion
Teacher's role: authority	____:____:____:____	Teacher's role: nonparticipant
Students have no clear sense of purpose	____:____:____:____	Students have clear sense of purpose
Less than 1/3 student participation	____:____:____:____	Almost all students participate
Student interest low	____:____:____:____	Student interest high
Class is quiet	____:____:____:____	Class is noisy

General teacher style

Teacher's stance: apart from students	____:____:____:____	Physically close to students
Practically no teacher movement	____:____:____:____	Much teacher movement
Teacher doesn't draw out students	____:____:____:____	Teacher makes efforts to draw out students
Teacher is strict with regard to student behavior	____:____:____:____	Teacher is permissive
Teacher "talks down" to students - much	____:____:____:____	Teacher "talks down" to students - none
Teacher dominates the class	____:____:____:____	Teacher and students work together cooperatively

Analyzing Observations

In mulling over observations, teachers may want to keep in mind some questions that include both scaled items and other dimensions of the classroom.

Physical Space

One can learn a lot about the atmosphere of a class from the use of physical space. How are the seats arranged, in a circle or in small groups facing each other, or in regular rows, all facing front? Does the seating pattern encourage the children to interact mainly with the teacher or with each other? Does it restrict the teacher's movement so that he spends most of his time in one area of the room?

Classroom Management

How much does the classroom belong to the teacher and how much to the children? Is the bulletin board decorated by the teacher or by the students? What is the amount of self-initiated student movement around the classroom? Do children feel free to leave their seats when they have reason to, or do they first ask for the teacher's permission? What kind of student behavior does the teacher expect? What behaviors in students are encouraged? What behaviors are discouraged? How does the teacher do this?

Modes of Verbal Activity

The teacher who is interested in analyzing the learning environment in his own classroom would probably want to define carefully the goals of verbal activity and then analyze the method of verbal exchange for appropriateness and results. Since verbal activities are dominant both in Man: A Course of Study and in other social studies, it is useful to consider the various forms of verbal activity that occur in classrooms.

Instructions from the teacher.

Lecture by the teacher. Even if the duration is short the teacher may be said to be lecturing if he is not soliciting student response.

Question-answer. In question-answer work, the questions usually come from the teacher; they aim at specific answers; once answered, the interaction is complete -- student comments do not build on one another.

Guided discussion. To be called a discussion, some student-to-student interaction must occur; if the exchanges are solely student-to-teacher, we consider this question-answer. In a

guided discussion the teacher clearly directs or leads the group. He makes statements or asks questions which clarify certain points, or encourages certain answers, or redirects the course of the discussion. Often there is at least a general notion of an "answer" in the teacher's mind.

Open-ended discussion. While the teacher may set up the general topic of discussion or pose the problem for the class to consider, no one answer is sought. The teacher does little leading.

By focusing attention on the various modes of verbal activity we do not mean to imply that question-answer work is inappropriate, or that the teacher should never lecture. A brief lecture may be the most efficient way of conveying information. In planning one's strategy, it can be helpful to be aware of different modes of verbal activity and to consider the appropriateness of each for particular goals.

Looking for behaviors which indicate the degree to which verbal activities are student-centered, and examining both sides of the teacher-student relationship can be useful. For example, the way questions are structured determines a good deal of the nature of students' responses. The points below suggest issues the teacher may want to consider (some of these dimensions are included in the observation scale).

-Are the questions factual or opinion-oriented?

-Do they call for long or short responses?

-Does the teacher ask many or few questions?

-Do questions come only from the teacher or do students initiate?

-If student questions are tangential to the thrust of the lesson, how are they treated?

-How are students' comments used? Are they made directly to other students, or are they an exchange between student and teacher?

-How do the students react to the verbal activity? Do they participate, appear interested, and understand the purpose?

Student-Teacher Relationship

What is the role of the teacher in regard to a learning situation? Is it that of an authority, a guide, a resource, or a nonparticipant? Does the role change with the activity? For example, does he take a more peripheral position during certain types of verbal activities or during nonverbal activities?

Motivation

Do children appear to be learning because of extrinsic rewards or do they appear internally motivated -- is there a will to learn? Along with this, the amount of apparent student interest is a good index to consider.

Summary

After reviewing questions and issues such as the preceding, and the classroom environment as defined by the checklist assessment, the teacher has a considerable information base for thinking about roles in the classroom, pacing of a lesson, teaching and learning styles, and general results of methods. By now, it must be more than clear to the reader who has borne with us this long, that we have certain biases about what generally produces a "good" classroom environment; but specific variations on some general student-teacher behaviors are truly infinite. The major goal is not conformity to some hypothetical ideal (there is no such animal!) but clarification of the teacher's special strengths and style so that these become more powerful tools in this profession of constant challenge.

Observation itself is a special kind of reconnaissance -- to find out what is actually happening in class. The raw material of observation gives the teacher specific information to reflect upon. It provides feedback about the teaching process, and facilitates evaluation and self-reflection. The act of selecting observation criteria forces reflection about one's pedagogic goals. We believe that the articulation of one's aims and methods is an important component of powerful teaching. To the usual question about teaching methods -- "How much do the children learn?" -- we would add, "To what extent is the teacher facilitating student learning?"

A Note on Accountability

Parents and school personnel are sure to have considerable interest in the impact of this course on your students. Many of them will be most familiar with traditional methods of evaluation, and will look for results according to standardized testing instruments and quantitative reporting of student learning. This volume is intended to give you new and powerful tools* for accounting for children's growth within your special realm of responsibility, the classroom. By using a range of methods sensitive to the broad goals of education and of Man: A Course of Study, you have more important information than that traditionally collected through standardized testing. How do you introduce the community of parents and educators to this new system of evaluation? What kinds of results can you display and what kinds of data can you communicate pertinent to decision-making about new curricula? As you work with the course, many ideas are bound to develop, but as triggers to your own thinking, we suggest:

1. A "concept night" -- a workshop focused around exploring a few major concepts of the course. Parents and other interested adults could be invited to join students in small group work where a problem is set up for exploration and films, reading materials etc. of the course are used as sources for investigation. Using students as group leaders would give them a chance to demonstrate the interactive, communicative skills they are developing. Activities similar to those suggested in the Teachers' Guides might be fun and informative; for example, 1) constructing the baboon-environment board (p. 43, Baboons); 2) exploring what a tool is and designing a tool (pp. 38-45, The Netsilik Eskimos at the Inland Camps); 3) exploring the Netsilik inner world (pp. 8-9, The Netsilik Eskimos at the Inland Camps). Everyone participating would have the chance to flesh out a concept in a real-life, real-time situation much as it occurs in the course.

2. A display of student creative work including special projects, art, stories, poems, etc. These works might be organized around central themes of the course as a demonstration of students' interpretation and understanding of these themes.

3. A brief tape of selected student interviews. Such a selection could include students' views on the materials, their attitudes toward course activities, and sequences that develop ideas of the course -- their use of examples, the kinds of questions they raise, etc. If the first part of the tape covered an interview with a group of children early in the course, then the second part could well focus on these same children much later in the course, thus illustrating growth in vocabulary and information and new understandings of the central questions of the course. (some of the questions suggested for the final interview might be more appropriate here).

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*An unusually complete and innovative system for evaluating all aspects of a school program is presented in Evaluation as Feedback and Guide, prepared by the 1967 Yearbook Committee, Fred T. Wilhelms, Chairman and Editor, Association for Supervision and Curriculum Development, NEA, Washington, D.C.

During the student display suggested above, there might be special times when the tape could be played for groups of parents and other adults, with brief commentary by the teacher as to what he or she listened for in the tapes, and what can be gained by both student and teacher through use of this technique. To use this suggestion, careful recording of the interviews is necessary.

4. A newsletter to parents, other teachers and adults, and interested schoolmates, prepared by both the teacher and children, could a) explain briefly the methods of evaluation used in this course (this would be the teacher's task; as suggestions, see the introduction to this Handbook, which could be re-written with your audience in mind), and b) include samples of student work selected by themselves. Several of the class could work as an "evaluation committee" to select what they consider to be representative samples of all the creative work their class has done. They could write brief reviews and interpretations to accompany the work, mentioning when it was done, whether it was a group or individual project, and what part of the course it was associated with. Such material as student life-cycle charts, poems on a theme such as "birth", observations of a gerbil's life, could be included.

We have avoided in these suggestions the simple numerical format of grades and test scores with which most adults are familiar, even though such an accounting could be given in terms of the content questionnaire. Through the conversion table given on page 71 one can establish a normative base for individual or class performance for the first half of the course, and this reporting format is available for use when needed.

The emphasis is not on new approaches simply because we feel there is no value in quantitative evaluation. But there has been great overemphasis on this narrow approach, to the detriment of learning and joy in learning. Knowledge and intellectual power are so much larger than a few specified outcomes, and learning involves so much more than knowledge alone -- a sharing of learning, pleasure in the exchange and expansion of ideas. If the strategies in this Handbook work at all, teachers and students will feel that evaluation is a time to reflect and summarize together, and that it is a good task among many tasks of learning, one more activity that helps us to understand "What makes man human?"

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